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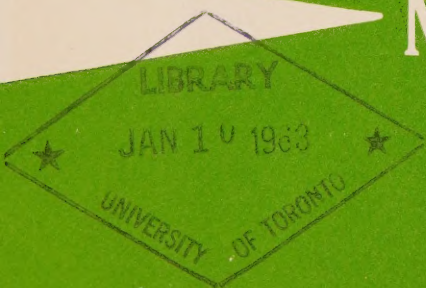
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THE DEPARTMENT
OF
NORTHERN AFFAIRS
AND
NATIONAL RESOURCES



ANNUAL
REPORT
FISCAL YEAR
1961-1962



A55 Government
Publications

Department of
Northern Affairs and
National Resources

ANNUAL REPORT

FISCAL YEAR 1961-1962

Including an article

THE "RESOURCES FOR TOMORROW" CONFERENCE

Price: 50 cents

Cover design and sketches by Arthur Price.
Sketches are from native designs in the National Museum of Canada.



ROGER DUHAMEL, F.R.S.C.
QUEEN'S PRINTER AND CONTROLLER OF STATIONERY
OTTAWA, 1962

Price: 50 cents

Catalogue No. R1-1962

*The Honourable Walter Dinsdale, P.C., M.P.,
Minister of Northern Affairs and
National Resources.*

Sir:

I have the honour to submit the Ninth Annual Report of the Department of Northern Affairs and National Resources, for the fiscal year which ended on March 31, 1962.

The year covered by this report marks a number of important milestones in the fields of responsibility assigned to this department. Perhaps over the long term the most important will prove to be the "Resources for Tomorrow" Conference which was convened in Montreal, October 23-28, 1961. For the first time, this conference brought together Canadian specialists in all the fields of activity associated with renewable resources, including agriculture, water, forestry, fisheries, wildlife and recreation. The conference was initiated by your predecessor and sponsored jointly by the federal government and all ten provincial governments. The department co-ordinated the preparatory work, including a very valuable compilation of material on resource problems, undertook the conference arrangements and was well represented during the meeting itself.

The conference made an important contribution to the better understanding of the problems of renewable resource management, both among experts and among the general public. The importance of multiple use of resources is now more widely understood, and the insights gained at the conference will be reflected over many years in the day-to-day decisions of federal and provincial governments and of the industries and associations concerned with the use of our renewable natural resources.

May I call your attention particularly to the special article entitled *The "Resources for Tomorrow" Conference—A Perspective* which forms a part of this annual report.

For this department, the growing pressure of visitors on the facilities of the National Parks gives particular point to one of the aspects of resource use which was discussed at the conference. During the single year covered by this report, visitors to the National Parks rose 11 per cent over the previous year to a new record total of 5½ million. Camping holidays continued to increase in popularity; the number of camper-days recorded rose 14 per cent to almost 1½ million. These trends towards increased park use and towards camping show no indication of levelling off, and it has accordingly been necessary to expand and enlarge park facilities to provide for the growing demands of Canadians and of visitors from other countries.

The addition of a new park to the system was officially marked on July 15, 1961, with the formal opening of Terra Nova National Park. During the year, extensive work was undertaken on roads in the parks, including

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Inserted at the back of this Report is a map showing the location of national and historic parks; game reserves; highway projects; water resources, wildlife, engineering and Northern Administration offices and posts, and other centres of departmental activity.

Department of Northern Affairs and National Resources*

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Private Secretary	A. S. WAKIM

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Assistant Deputy Minister	E. A. CÔTÉ
Assistant Deputy Minister	F. J. G. CUNNINGHAM
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Secretary, "Resources for Tomorrow" Conference	B. H. KRISTJANSON

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Engineering Division	Chief—A. B. CONNELLY
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Territorial Division	Chief—W. G. BROWN
Welfare Division	Chief—W. L. RUDNICKI

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National Historic Sites Division	Chief—J. D. HERBERT
Engineering Services Division	Chief—G. L. SCOTT
Canadian Wildlife Service	Chief—W. W. MAIR

*As of Oct. 15, 1962.

Water Resources Branch

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Hydraulics Division	<i>Chief Hydraulic Engineer</i> — R. H. CLARK
Advisory Committee on Water Use Policy	<i>Secretary</i> —D. W. ROSS

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Geology	J. F. HENDERSON (<i>Hon. Curator</i>)
Mineralogy	S. C. ROBINSON (<i>Hon. Curator</i>)
Palaeontology (Vertebrate)	WANN LANGSTON JR.
(Invertebrate)	D. J. McLAREN (<i>Hon Curator</i>)
Zoology	A. W. F. BANFIELD
Entomology	G. P. HOLLAND (<i>Hon. Curator</i>)

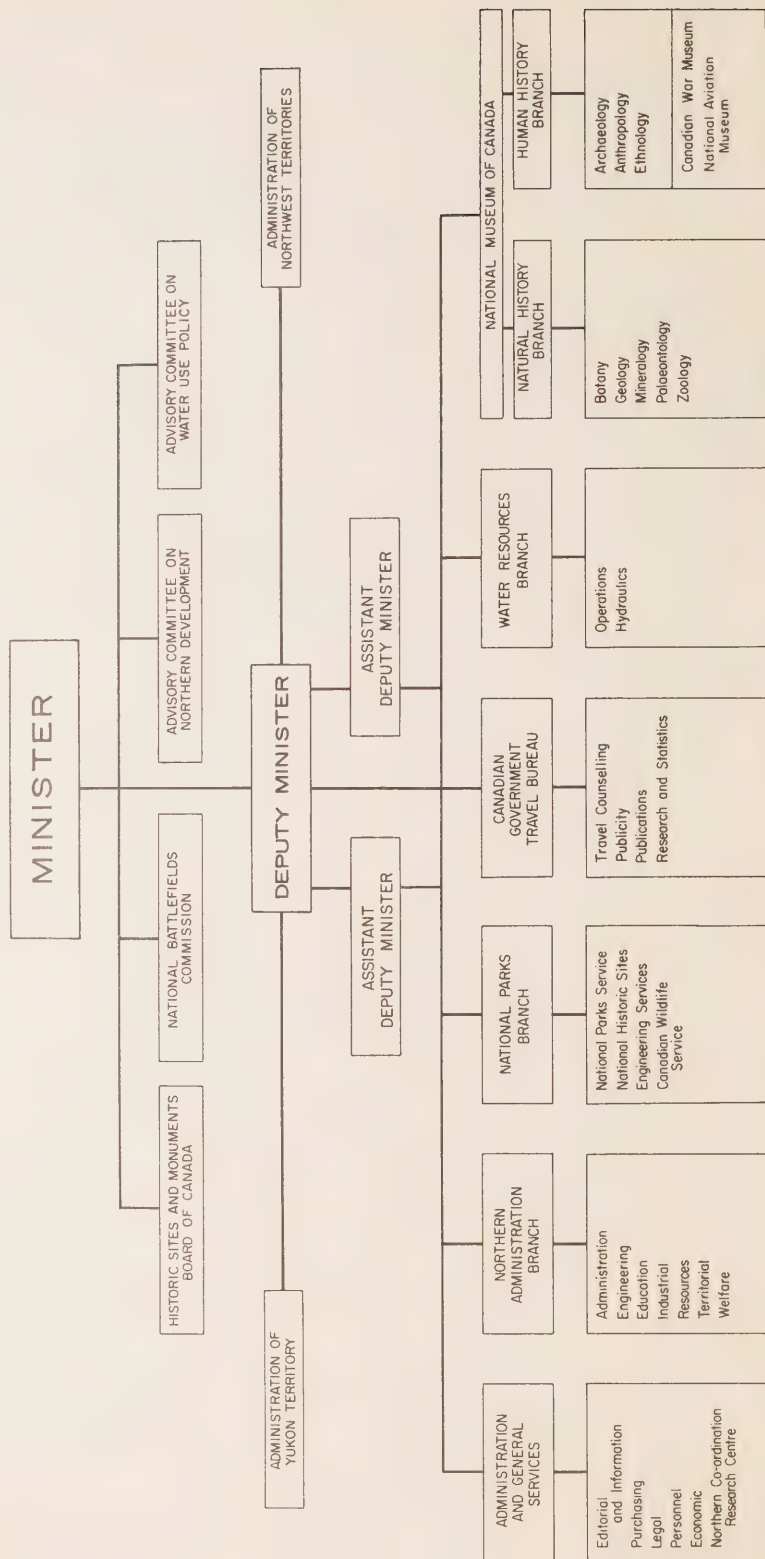
Human History Branch

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Physical Anthropology	LAWRENCE OSCHINSKY
Ethnology	T. F. S. McFEAT
Folklore	CARMEN ROY
Canadian War Museum	L. F. MURRAY
National Aviation Museum	K. M. MOLSON

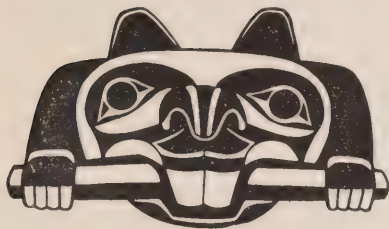
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Travel Information Division	MAYNARD CAMPEAU
Publicity	J. A. CARMAN
Publications	HAROLD BETTS
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DEPARTMENT OF NORTHERN AFFAIRS AND NATIONAL RESOURCES



The "Resources for Tomorrow" Conference



A Perspective

The "Resources for Tomorrow" Conference of October 1961 is history now. But unlike most forms of history its yesterdays all face into the future. Not in a single direction but in a complex of many futures.

The best use and management of renewable resources is not, in any country's experience, an uncomplicated task. Nor is it one where the results are always easily identified with the amount of research, planning, and action that goes into achieving them. Dealing wisely with the future of the largest groups of renewable resources—forest, water, agriculture, wildlife, fish, and land use as this relates to recreation and community development—requires a massive compact between policy, research, and management within, between, and beyond governments. And all of it in a context of economic and social change that is vulnerable to forces not originating in Canada.

Thus the "Resources for Tomorrow" Conference is a big gathering to bring into perspective. In some aspects it may even be too soon to try. It was the first meeting of its kind ever held in Canada and, looked back upon, it appears even larger. It took place a year ago yet it is not an event that one thinks of in the past tense. For all that was most valuable in its discussions, and in the work that went into its two preparatory years, was a type of planting. And seed, whether planted at a forest station or in a farmer's field, takes time to grow and more time still to fully mature. Meanwhile it is there, summer and winter, working in the ground.

Those who expected visible and spectacular results, who waited for major decisions of policy, may have gone home disappointed. It was not that kind of meeting. What it achieved must be measured against what it set out to do. Since this type of national discussion had not been held in Canada before, its aims did not set out to be more than exploratory. This was implicit in every stage of the planning. Each participant, including the most highly-qualified and knowledgeable, was there as much to learn as to make his own specialized contribution.

The "Resources for Tomorrow" Conference, although sponsored, organized, and financed jointly by the federal and provincial governments of Canada, did not follow the traditional pattern of federal-provincial meetings. This was not an occasion for bargaining. No formal proposals were submitted nor binding agreements reached. Attendance was not confined to official agencies. Specialists from industry, the universities, and private associations were invited to attend, to share in workshop leadership and the preparation of background papers. The aim of the National Steering Committee of Ministers, which planned and guided the conference, was to get the best thinking avail-

able in each resource sector and to encourage the interplay of many points of view on resource questions. The effect, once the conference opened, was to create an enormous and many-sided pool of informed opinion, one where experts often sharply disagreed but where specialists gained new and broader insights into the problems of resource management.

To keep a field of inquiry so wide within workable limits, it was confined to "renewable" resources—a term that too many people still confuse with "inexhaustible".

Canada's great separating distances—combined with a pattern of regional jurisdictions that create special problems of co-ordination—make this country as conference-prone as any. What set apart "Resources for Tomorrow" from those conferences that had gone before was that here for the first time an occasion had been created to bring together under one roof a wide spectrum of hard resource-use knowledge represented by many expert Canadians. "Expert" is a doubtful compliment in a society that has cheapened it by attaching it to so many of the wrong names but this was one occasion when its currency was not debased. Those who met in Montreal were the best brains available in Canada in their specialist fields.

But this was intended to be more than the taking of a long, hard look at the resource situation by experts. Its secondary aim—and the hope of those who planned it—was to arouse public awareness of these subjects where more than the lives of experts are deeply, personally and continuously affected.

The National Steering Committee that shaped the course of the conference was chaired by the Honourable Walter G. Dinsdale, Minister of Northern Affairs and National Resources, and made up of a Cabinet Minister from each province. A Secretariat worked with the participating governments to handle the immense amount of advance groundwork. During this phase, 80 background papers were commissioned from 100 authors and co-authors, translated into French and English and circulated to participants for pre-conference study. Advisory Committees in the various resource sectors helped clarify and spell out the main resource-use problems and select authors. Two pre-conference volumes contained 12 papers on agriculture, 12 on water, 14 on regional development, four on the north, 11 on wildlife and nine each on forestry, fisheries and recreation.*

Mr. Walter Gray, Chief of the Ottawa Bureau of the Toronto GLOBE AND MAIL, performed a notable service for the conference through a series of articles on the background papers which appeared between March and September 1961 and were later reprinted in booklet form.

Dr. A. J. Dakin, Head of the Division of Planning at the University of Toronto, gives a thoughtful and informative appraisal of the quality of the studies in the May issue of PLAN, published by the Town Planning Institute of Canada. He concludes, "Some of the papers are excellent; many are good, a large number are of value to the planner. A most important service has been

* These, a volume published later and the Proceedings, are available from the Publications Branch of the Queen's Printer in Ottawa.

performed in bringing together the contributions of experts in the many fields of Canadian resources . . . Those who have been responsible for organizing the writing of these papers, for ensuring their reasonable balance, and for assembling them into a coherent whole are to be congratulated on having achieved a most exacting task in a workmanlike way. They have provided a powerful stimulus to future thought and action."

The "Resources for Tomorrow" Conference, opened by the Governor General on October 23rd and attended by the Prime Minister, Ministers from all provinces and participants of every stripe of opinion, has been called the most important gathering of Canadians since Confederation. It was certainly one of the biggest. The Fathers of Confederation would have been thunderstruck, and either proud or appalled (according to temperament), if they had sat down to tackle such a week's agenda.

More than 700 participants thronged into the opening Plenary Session at the Queen Elizabeth Hotel and listened to a series of addresses from speakers who obviously felt that they were sharing in the making of history and succeeded in conveying this sense of an historic occasion to their audience. No conference in Canada can ever have put itself, or been put by others, so diligently on record. The 80 background papers published in advance totalled more than 850,000 words. To this must be added an estimated million and a half words contributed by the news media and the oral output of 18 workshops. About 250 of the participants assumed some type of leadership responsibilities. It was clear that those who gathered in Montreal had two years of homework behind them and came there recognizing their opportunities.

This could have been a gathering that despite so much painstaking work sank beneath the sheer weight of its aims, the massive bulk of its research. But nothing like this happened or was in danger of happening. The subject-matter, like so many of the minds that dealt with it, was too tough and vital, too closely associated with the economic fortunes of Canada, to founder. As the week wore on participants must more and more have felt a sense of working against time.

One of the conference's material and measurable benefits to Canada, as Dr. Dakin points out, is the immense amount of resource-use thinking that reached participants and the public from coast to coast. The Background Papers and the Conference Proceedings must comprise the most comprehensive documentation ever placed at the disposal of Canadian agencies engaged in, or associated with, the management of renewable resources.

This welding of experience, drawn from so many regions and expressing so many points of view, creates a wonderfully varied mosaic of what life is like in Canada today and makes clear that the situations confronting one province, or an area within a province, are not too different from what is happening to people in another region or in the nation as a whole. Some of the papers can only be appreciated by experts; others would be good reading for anyone interested in learning more about some of the forces now shaping the national economy and Canadian society.

They include expert appraisals of what the future looks like for much of

the great sprawl of developed or still half-raw resources that nature has tossed down so casually across the northern half of this continent. They suggest priorities for action. But they contain a large share of homely and recognizable problems, too. Big towns appalled by their own bigness, rural communities disturbed by the altering structures of life on the farm.

Conference workshops offered large and stimulating opportunities to explore management approaches to a group of resources that are sensitive to economic pressures and react constantly to the forces of social change. Participants who wrestled with the overriding problem of how to achieve a more co-ordinated, less uneven and piecemeal approach to policy and management amid the shoals and sandbars of Canada's Constitution, were reminded daily that they had a series of tigers by the tail.

But this was not a conference called to explore simple problems; it was a meeting to try to develop better ways of dealing with vital ones—to throw up fresh thinking in the sort of cut and thrust that generates new development. In this, "Resources for Tomorrow" was building on foundations laid more than half a century ago.

When Prime Minister Diefenbaker, speaking in Winnipeg in 1958, urged the calling of a national conservation conference he was proposing to advance and enlarge a pattern of consultation that, up to that time, had considered major resource sectors in the economy mainly as single entities. He was proposing that, since resources overlap in their economic and social effects, they be considered as a group against the larger background of Canada's total development.

It was in 1906 that an earlier Prime Minister, Sir Wilfrid Laurier, presided over the first Canadian Forestry Convention when the relationship between forestry, agriculture, and water was discussed. The Canadian Commission on Conservation followed three years later. This recognized the need to apply sound conservation practices to Canada's resources and broadened the terms of reference to include lands, wildlife, fish, minerals, fuels and public health. A conference on wildlife followed in 1919 and one on soil fertility the next year. From such roots the pattern has enlarged until parts of its substance passed beyond discussion and became part of Canadian law. The Prairie Farm Rehabilitation Act, Canada Forestry Act, Agricultural Rehabilitation and Development Act, the continent-wide Migratory Birds Convention Act, and others—"Resources for Tomorrow" owed something to all of them.

Now the National Steering Committee has been succeeded by a Resources Ministers Council whose chairmanship will rotate. The Council held its first meeting in September 1962 with the Honourable J. W. Spooner, Minister of Lands and Forests for Ontario, presiding. The remaining members are the Ministers primarily responsible for renewable resource policy and management in the federal and all the provincial governments.

It was agreed in advance that the agenda should include an examination of federal-provincial resource agreements as seen in the light of the "Resources for Tomorrow" Conference, and the relationship of agricultural programs to other resource policies.

There can have been few national conferences in Canada, or any other country, where the problems dealt with by experts were more familiar to non-experts through the pages of their daily newspapers and their own experience. One need not be an expert to recognize the threat that lies in urban sprawl and polluted waterways, in tainted air and over-burdened recreation lands. It takes no skill to see that no force short of the atomic bomb can so systematically and ruthlessly destroy the character of Canada's least replaceable landscapes as sheer apathy and unconcern. And that it is habitat preservation, not luck, that gives the sportsman a full game bag and keeps the wild ducks flying. Almost every home-owner in Canada knows that when you want to get a better return from your property, you have to start out by understanding what you have and learning how to use it.

As a result of the conference, the need for a clarification of goals of resource development is now more clearly understood. This was one of its objectives and participants were able to make a substantial contribution to the clarification of this need. Goals, to be effectively recognized in a democracy, must be formulated in full co-operation with the people involved. Resource development goals, no less than other objectives of national life, must find expression through national participation and discussion.

It was agreed that this "national seminar" should be a continuing activity. One reason for this was the productivity of the meetings in Montreal. Fundamentally, however, the continuation of the activity was seen as a necessary step in resolving constitutional barriers (real or imagined) to resource development. No one disputes the proprietary interests of the provinces in the nation's resources. Nor does anyone question the responsibility of the federal government in promoting national welfare. Yet there remains the perplexing problem of reaching a synthesis between the more local and regional objectives and the long-run needs of national development objectives. The parts do not necessarily add up to a satisfying national fabric—it requires tailoring of a high order.

The fabric of Canadian life will remain related more, however, to local and regional development programs than to directives derived from federal authority. It is within the provinces and within the various regions of Canada that resource planning and resource development will originate. For this reason much emphasis was placed on regional planning in the conference discussions—its techniques, its requirements for data and personnel.

Strong provincial and regional leadership are therefore prerequisite to getting on with the job of resource management and development. Without such leadership the growth rate will be inadequate.

This having been reiterated throughout the conference it was generally agreed that each province (and the federal government) should proceed as rapidly as possible to improve resource planning procedures. Effort should be made to co-ordinate the work of the various government departments and a continuing review of resource development projects should be maintained.

Provincial resource planning is likely to be strengthened further through regional meetings of personnel. The regional approach was clearly indicated

at the conference as being required to meet a wide range of problems. The interprovincial flow of rivers for example suggests the need for regional planning of water use. But there is a growing number of examples.

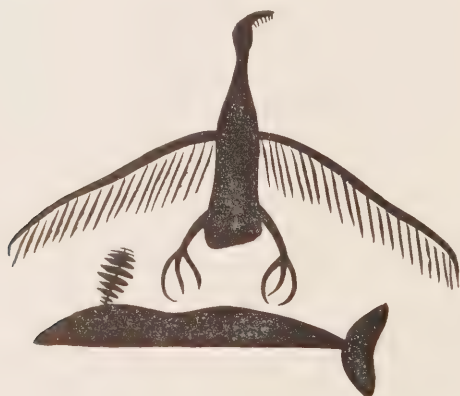
Another major conclusion of the conference was that a continuous exchange of views should be maintained between the federal and provincial governments in matters of resource policy. Here again a step has been taken toward meeting conference recommendations in the formation of the Resource Ministers Council. Each of the eleven senior governments is represented on the Council. Its principal function is to provide for continuous consultations between the governments on conservation and resource development policies and programs.

A broad base of support for the activities will, in the years ahead, be derived from the findings within each of the sectors of the conference. In each area—agriculture, water, regional development, forestry, wildlife, recreation and fisheries—more specific recommendations emerged.

Over and above all this, more people have a greater understanding that renewable resources are basic to their prosperity, that these resources are essential to man's physical and mental recreation in the Twentieth Century. If the conference had done nothing else but to help bring these points to Canadians, it would have been worthwhile.

The "Resources for Tomorrow" Conference, despite its impressive stature, was closer to the lives and needs of Canadians than any of the conferences that had gone before. This, as much as the professional competence that created and sustained it, may be what will ensure its place in history. It dealt with trends and situations that may take experts to diagnose and deal with but that ordinary Canadians in great numbers, going about their daily lives, can recognize, share, and above all, be concerned about.

The conference was national in the accepted sense but it was national in a deeper sense, too. For a bit of it belongs to all Canadians. Not only the experts share responsibility for what happens to the future of Canada's renewable resources.



Introduction

This is a development department responsible for stimulating growth and progress in the north and, through many channels, aiding in the wise management of national resources. Under various names it has been in existence almost since Confederation.

Seven Branches

The Northern Administration Branch is responsible for the economic and social development of the Yukon and Northwest Territories and the welfare of the Eskimo people. These responsibilities are heavy.

The National Parks Branch administers Canada's National Parks and National Historic Parks and Sites, and so is charged with combining sound and progressive land use policies with the preservation of much of Canada's historic past. The Canadian Wildlife Service, a part of the Branch, is the federal agency responsible for national wildlife conservation and research.

The Water Resources Branch collects, evaluates, and publishes basic data on Canada's waterpower resources and studies broad national questions of water use policy.

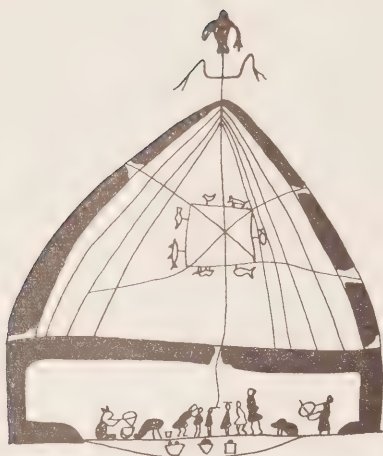
The Natural History and Human History Branches comprise the National Museum of Canada, engaged in scientific research in natural history, archeology, and anthropology. The Canadian War Museum and the Canadian Aviation Museum are both part of this Branch.

The Canadian Government Travel Bureau works in many ways to increase tourist travel. Its major effort is the vigorous promotion of Canada's scenic attractions in the United States.

Serving these operating Branches are five administrative Divisions. Under general Direction from the Chief Administrative Officer they comprise Administration Services—Economic, Editorial and Information, Legal, Personnel, Purchasing.

Boards, Commissions, and Advisory Committees reporting to the Minister include the Historic Sites and Monuments Board of Canada, the National Battlefields Commission and the Advisory Committees on Northern Development and Water Use Policy.

Northern Administration Branch



The Northern Administration Branch is concerned with the administration of the Northwest Territories and the Yukon Territory, Eskimo affairs, and the resources of both territories as well as certain Crown lands and mineral rights in the provinces which are the responsibilities of the federal government. The territorial governments have powers roughly analogous to those of provincial governments. The territorial civil service in the Yukon administers all territorial matters from Whitehorse, but in the Northwest Territories, the

Branch provides administrative machinery for the territorial government.

The Branch is headed by a Director and two Assistant Directors who supervise the six Divisions and the Offices of the Administrator of the Arctic, and the Administrator of the Mackenzie; it also has certain responsibilities in connection with the Commissioner of the Yukon Territory.

The Education Division operates the school system of the Northwest Territories, except for two school districts in Yellowknife and a separate school district at Hay River. It also operates schools for Eskimos in Arctic Quebec.

The Engineering Division is responsible for Branch construction and maintenance and the supervision of the financing of the "Roads to Resources" program.

The Industrial Division is responsible for industrial liaison, area and community planning, market research, co-operatives, the operation of a Northwest Territories tourist office and the development of handicrafts, resource harvesting, and other programs to improve the economic well-being of northern people.

The administration of mineral and other major resources (excepting game) is handled by the Resources Division.

The Territorial Division deals with the administration of the legislation of the Northwest Territories, municipal affairs, and with certain functions connected with the office of the Commissioner of the Yukon Territory.

The Welfare Division provides welfare services in the Northwest Territories and for Eskimos in Arctic Quebec and southern Canada.

The Office of the Administrator of the Mackenzie

District Organization

This office, situated at Fort Smith, provides staff for the administration of federal and territorial responsibilities in natural resources, education, municipal development and welfare in the Mackenzie District and Banks and Victoria Islands.

The District comprises three Administrative Regions with headquarters in Fort Smith, Yellowknife, and Inuvik. Area headquarters are at Hay River, Tuktoyaktuk, Fort Simpson, Coppermine, Cambridge Bay, Fort Smith and Yellowknife.

A substantial increase in the size and scope of the activities of the office of the Administrator of the Mackenzie is reflected in the establishment of a new office at Spence Bay and the appointment of Municipal Affairs and Industrial Development officers. Emphasis on a broader education program, self-management in local affairs, resource development, an improved highway network, new housing programs and increased social aid have all made their impact felt over the past year.

District Economy

Most of the population has a subsistence economy partially dependent on hunting and trapping in winter, on fishing and seasonal employment in summer.

Gold mines in the Yellowknife area and oil at Norman Wells continued to be major revenue producers. Two major orebodies, tungsten at Flat River and lead-zinc at Pine Point, are being developed and will provide the economic base for two new settlements. A gold find of considerable promise resulted in a rush of prospectors to the Contwoyto area. Exploration for oil continued throughout the Mackenzie Valley.

On February 12th the Minister of Northern Affairs turned the first sod for construction of the 438-mile Great Slave Lake Railway running north from Grimshaw, Alberta, to Hay River on Great Slave Lake and the lead-zinc deposits at Pine Point. First steel to cross the 60th parallel into the Northwest Territories, the railway is a milestone that could affect exploration and development throughout the whole Mackenzie District.

Construction was completed on a microwave system to Hay River and on land line connections from Hay River to Yellowknife and Fort Smith.

Education

Enrolment rose this year by about 240 in the 30 District schools, bringing the total to some 3,900 pupils in 157 classrooms. This is made up of about 650 Eskimos, 1,200 Indians and 2,050 other pupils.

A curriculum Committee composed of opportunity class teachers developed a study program for 16-year-old pupils who had only attended

school for one or two years. The program was designed to upgrade their academic background and enable them to train for skilled occupations.

A "Norming" project was undertaken to provide average scores on standardized tests for pupils in the Territories. Norms used in the past were based on pupils in southern Canada and a more accurate picture of the abilities of northern children was required.

Vocational training courses in auto mechanics, carpentry, welding, and heavy duty equipment, and matriculation and high school leaving academic courses were conducted at the Sir John Franklin School, Yellowknife. Classes in industrial arts were offered at Fort Smith, Hay River, Rae, Fort Simpson, Fort McPherson, and Inuvik. At many schools adults attended evening classes in typing, painting, welding, sewing and basic English.

New vocational training projects undertaken this year included a Buffalo Guide Training program, a Junior Trappers' Course, and the Fort Smith Sewing Project. The fur garment project at Aklavik continued to be an important training aid for local craftsmanship. Twenty-seven students went to southern Canada for training courses unavailable in the north.

Engineering

The Northwest Territories Highways system now comprises approximately 640 miles. Included is the 285-mile Yellowknife Highway whose maintenance was taken over by the Northern Administration Branch during the summer of 1961. Three large maintenance camps, at Enterprise, Providence, and Stagg River were built along the Mackenzie Highway and several tourist campsites developed at scenic points on the road.

Other major construction projects included a nursing station and medical officer's residence at Cambridge Bay, a school complex and powerhouse at Gjoa Haven, a 3-bedroom teacherage and powerhouse at Nahanni and an abattoir at Hay Camp in Wood Buffalo National Park. Residences, warehouses, and storage facilities were built at many settlements in the District and an extensive Winter Works program supervised.

A policy has been approved whereby private power consumers can be supplied with power from the department's power plants and contracts with private consumers are being negotiated.

Welfare

Welfare programs concentrated on basic needs with emphasis on child care problems. The Child Welfare Ordinance, making many important changes in the procedure for protection and care of children, was approved by the Territorial Council.

Construction and staffing of the Inuvik Rehabilitation Centre was largely completed. Twenty-one houses for Eskimos were built at Inuvik as part of a winter logging program. Logging and construction of the houses created useful winter employment. Three welfare houses were built at Cambridge Bay and a small home for elderly people opened in Aklavik.

Forests

An arboretum was established at Fort Smith where transplants and seedlings of various species were planted with records being kept of survival and growth. Weather was in part responsible for lowered timber production in all areas and classes. Production totalled 3,100,000 cubic feet, a drop of about 700,000 cubic feet from 1960. Problems of moving logs from the timber berths to the mills were made more difficult by bad weather.

Mining

Applications to record claims at the Mining Recorder's office in Yellowknife rose to 1,770 this year, a gain of 560 over 1960. Most of the increase was caused by the staking at Contwoyto Lake by the Canadian Nickel and the Conwest Companies. A total of 8,526 claims were in good standing at the Mining Recorder's office. All mines inspected this year showed an excellent safety record. Continued interest was focussed on the development of tungsten mines in the Flat River area and on the lead and zinc deposits at Pine Point.

Wood Buffalo National Park

For the first time buffalo meat from Canada's largest National Park, Wood Buffalo, was available in southern Canada. Quality of meat and a major promotional program resulted in an extraordinary public response and stocks were quickly sold out. A record number of 2,060 buffalo were corralled during the annual round-up out of a total population of over 14,000. Three hundred and ninety tested animals were slaughtered under the buffalo management program. Wood Buffalo National Park, over 17,000 square miles in area, is set aside for preservation of the wood buffalo. Though most have intermingled with prairie bison, a number of true wood bison have been identified and, by 1963, will be segregated in an isolated area of the park to preserve the species.

Game

A new Game Ordinance came into effect July 1, 1961. Under its provisions sport hunting of moose, black bear and mountain sheep was opened to residents of four years standing in the Northwest Territories. With the exception of sport hunting of bison (opened in 1959) this was the first time that big game sport hunting had been permitted in the Northwest Territories.

The caribou situation remained critical throughout the year. Hunting pressure remained heavy wherever the caribou came within range of settlements or hunting parties. The predator control program was continued on a smaller scale as the number of caribou taken by wolves is now much reduced.

Trappers had a good fur year. Catches and prices of white fox, mink, and lynx were at a satisfactory level. Prices for muskrat and marten were relatively low.

Trappers' councils, organized in ten of the larger communities, submitted many useful recommendations to the Administration.

Economic Development Projects

An Eskimo producers' cooperative at Cambridge Bay shipped 14,000 pounds of Arctic char to southern markets. In the Mackenzie Delta a departmentally supervised fishing program harvested 30,000 pounds of whitefish, frozen and sold locally.

At Aklavik the fur garment shop began to re-organize as an Eskimo co-operative. Fur garments worth \$19,300 were produced by fourteen women for local sale. A credit union was also formed at Aklavik. Production of handicrafts and carvings increased in volume and improved in quality. A new co-operative at Holman Island, with one at Coppermine, will co-ordinate local production and marketing.

The Inuvik laundry made a net profit of \$32,000 on a gross return of \$103,000 and employed eight Eskimos full-time. The buffalo kill at Wood Buffalo National Park produced 200,000 pounds of meat. More than half was sold within the Mackenzie District and the balance in southern Canada.

A northern sports fishing film was produced by the Branch Tourist Office in co-operation with the Territorial Government and commercial interests. Response to the film, and an increasing number of fishing lodges on Great Slave Lake and Great Bear Lake, were indicative of growing interest in the tourist possibilities of the District.

Municipal Affairs

A Municipal Affairs Officer has been appointed to serve the District indicating an increasing emphasis on local participation in municipal affairs and on the growth of local Government. The main program will be concerned with the formation and encouragement of municipal councils, school districts, development areas, and local advisory committees, together with community recreation groups, volunteer fire brigades and similar local bodies engaged in community development and self-management of local affairs. A related program is the co-ordination of Crown and private land subdivision with settlement planning.

Office of the Administrator of the Arctic

District Organisation

This office, with headquarters in Ottawa, is responsible for the administration of the Districts of Keewatin and Franklin (except Victoria and Banks Islands) and the administration of Eskimo affairs in Arctic Quebec. Regional headquarters are at Churchill and Frobisher Bay and in October 1961 an Arctic Quebec Regional office was created in Ottawa. These co-ordinated and directed area activities at Rankin Inlet, Coral Harbour, Es-

kimo Point and Baker Lake in the Keewatin region; Cape Dorset, Igloolik and Hall Lake in the Frobisher Bay region and local administration at Fort Chimo, Great Whale River, Sugluk, Port Harrison and Povungnituk in Arctic Quebec. The Arctic District Headquarters added a 2-man Industrial section in November.

Eskimo Economy

Permanent wage employment and seasonal work remained constant, particularly at the larger centres of Frobisher Bay, Churchill, Rankin Inlet, and along the DEW Line. An urgent need, however, continued to exist for the development of local resource-harvesting projects to offset the always fluctuating price of fur.

Studies at Port Burwell and Southampton Island indicated that the abundance of seal meat at Port Burwell could be used to greater advantage and that the Southampton Island area could support a larger population. At Whale River the harvesting of seal, fish, and other country foods resulted in a surplus later sold at Rankin Inlet. Detailed study was underway of economic measures to off-set the possible shut-down of the North Rankin Nickel Mine and provide Eskimo hard-rock miners with other types of employment.

Eskimo co-operatives grew in numbers and improved the quality of their product. The co-operative approach to resource harvesting and marketing was adapted to a widening range of local situations.

Education

Under the direction of the Arctic District Superintendent of Schools 66 classrooms were in operation with an enrolment of 1,463 Eskimos, 41 Indians and 100 other pupils, making a total of 1,604 students. Twenty-eight other Eskimos over school age received academic and vocational training at the Frobisher Bay Rehabilitation Centre. A part-time mission school at Repulse Bay received supplies and grants-in-aid and at Lake Harbour a summer school served the many Eskimo children in the hunting camps.

Besides the 66 classroom teachers, two industrial arts instructors and three home economics teachers were in the field. More emphasis was placed this year on adult education through the aid of specialists in the Education Division who went north and worked with the teachers.

Ten small hostels were maintained for the many Eskimo camp children who otherwise could not have gone to school, and more hostels are planned to serve isolated Eskimo communities. A 175-bed hostel to house 100 academic students and 75 vocational trainees will be built at Frobisher Bay.

New schools at Padloping, George River, and Grise Fiord will be opened in 1962 bringing to 28 the number in the Arctic District. A teachers' orientation course was held in Ottawa in the summer and winter workshops at Churchill, Frobisher Bay and Great Whale River.

Eskimos of the eastern Arctic numbering 122 took vocational training

courses that included hostel management, mechanics, equipment operation and maintenance, mining, prospecting, and other occupations.

Engineering Services

Under the direction of the Arctic District Engineer construction of varying types was carried out at 29 settlements. This included most of the essentials of growing communities elsewhere in Canada and ranged from homes to water and sewage systems.

At George River a sawmill operated by the Eskimo Co-operative supplied lumber for three homes, a school and power house. Only finishing materials could not be supplied locally. In addition to construction of homes, warehouses, and small schools in remote areas, the engineering services are providing underground water and sewage systems at Akudlik, Churchill, and Great Whale River. The Great Whale River system includes an underground hot water network to supply central heating to all departmental buildings. Although both jobs were not complete at the end of the year the Great Whale River system was in use and the Churchill facilities partially so. Contracts were arranged with consulting engineers for water and sewage investigations at four points in Arctic Quebec. Preliminary reports have been made for Port Harrison and Fort Chimo. This total project is proceeding by stages.

Materials for 103 Eskimo houses were delivered and construction carried out by prospective Eskimo purchasers with advice from departmental engineers.

Completed this year were: 15 2-bedroom houses; 11 3-bedroom houses; 24 Eskimo one-bedroom houses; 13 hostels; 2 school complexes; 9 classrooms; 10 warehouses; 7 power houses; 3 garages; 2 bathhouse-laundries; 2 rigid frame units; 4 freezers; 6 generating plants; and 2 bulk oil installations. In addition, six field cabins were built for the Department of National Health and Welfare.

Welfare

During the year the organization of welfare services in the Eastern Arctic continued to make steady gains.

A Superintendent of Welfare for Keewatin was appointed with headquarters at Churchill. Responsibility for providing medical-social services to Eskimos being treated in Manitoba was thus decentralized from the Arctic District to the Keewatin Regional office. The area social worker, based at Churchill, paid regular visits to Eskimo patients in Manitoba institutions.

Three children's receiving homes, a maternity home, a home for elderly people and two transient centres were operated in the District and supervised by welfare staff.

At Frobisher Bay the number of handicapped Eskimos enabled to help themselves through the services of the Rehabilitation Centre rose from 73 last year to 110 in 1961. In the same period the total of resident trainees rose from 41 to 59. Six rehabilitants after a period of training found employ-

ment in this growing town, five went south for more advanced training, one took over a barber shop, others, who chose to return to life on the land, were strong enough to do so. Training projects include a bakery, coffee shop, craft centre, movie theatre, barber shop, woodworking shop, organized hunting and fishing, child care, and women's sewing workshop.

The Rankin Inlet Rehabilitation Centre, though operating under an acute staff shortage, carried out an effective re-training and family welfare program. Many Eskimos come to these Centres handicapped by long periods in hospital and by other medical and social factors. A return of self-confidence through learning new skills within their capacity is often what they need most.

Resource Harvesting

An extremely active resource-harvesting program increased both the number of individual projects and the output of those already operating.

Eskimo fishermen's Co-operative at Koksoak, Whale River, Richmond Gulf, George River and Port Burwell, caught, processed and froze salmon, char, sea trout, white fish and cod for shipment to southern Canada. At Frobisher Bay the entire catch of char and cod was bought up locally. Fisheries at Baker Lake and Rankin Inlet also used the catch for local needs.

In southern Canada the Eskimo name for char—Ilkalupik—was becoming part of the language.

Eskimo response to the department's initiative in introducing them to the Co-operative principle is not surprising. To the Innuit—the people—it is traditional to pool resources and share the harvest.

Prints and carvings from Cape Dorset and Povungnituk, dolls and sealskin toys from Port Harrison, sealskin hats and other crafts from Port Burwell, Great Whale River, Sugluk, Fort Chimo and Frobisher Bay were making the name of Eskimo artists and craftsmen known far beyond their lonely Arctic landscapes.

Property

This section is responsible for requisitioning and shipping supplies and material to the eastern Arctic. A warehouse was operated at Montreal under supervision of expeditors from the Arctic office where 3,800 tons of supplies were received and prepared for shipment by summer sea-lift. Nine hundred tons were shipped north from Churchill in a similar operation.

Financial Administration

The Financial Administration Section controlled District financial operations, federal and territorial, and funds transferred from other departments for construction or other northern operations. In addition it provided the financial staff for the Arctic Quebec Regional office. The responsibilities of this section include cost control and the preparation of estimates for Welfare, Industrial, Engineering and Administrative Services.

General

The Arctic District office provided a welfare team for the annual Eastern Arctic Medical Patrol on the C.G.S. *C. D. Howe* in summer and air patrols were made to many communities by district, regional, and area officers.

In July representatives of the federal government and officers of the Federal Electric Corporation met to discuss DEW Line business. A second meeting, with officers from Mackenzie and Arctic Districts, to discuss Eskimo employment on the DEW Line, was held at Cambridge Bay in December.

Education Division¹

In the north children of all races go to school together.

Education in the Northwest Territories is the joint responsibility of the Federal and Northwest Territories Governments. The Federal Government is responsible for the education of Indians and Eskimos; the Territorial Government for the education of others.

Except within the organized school districts at Yellowknife and Hay River, the Department operates an integrated school system on behalf of both Federal and Territorial Governments. Costs are shared in proportion to the number of students enrolled. The Department also builds and operates schools for Eskimos in Arctic Quebec.

Yellowknife Public School District No. 1, Yellowknife Separate School District No. 2, and Hay River Separate School District No. 3, are financed partly by local taxation and partly through grants-in-aid from the Federal and Territorial Governments. The Education Division supplies inspection and supervisory services.

The Department provides elementary education and secondary academic or vocational education for students and for adults with special aptitudes. This program is being developed through construction of schools and student residences, curricula designed for a northern environment, bursaries and other student aids, and special vocational training projects.

In the Yukon Territory the school system is operated by the Government of the Yukon, except for the school at Old Crow. This comes under the Administrator of the Mackenzie. The Federal Government pays fees to the Yukon Government for the education of children of federal staff living in tax-exempt premises, and for the education of Indian children. The Education Division, though not responsible for operating the schools, offers advice to the Minister and territorial authorities on education policy.

Curriculum

Good progress was made this year in developing distinctive teaching materials directed towards the needs and interests of northern children.

¹See Appendix B, 4, 5, 6, and 7.

Supplementary readers were produced dealing with life in northern communities and new courses added in social studies, health and physical education.

The Curriculum Section provided consultant services to Superintendents of Schools, principals and teachers through teachers orientation courses, in-service conferences, and extensive field work in the Mackenzie and Arctic Districts. Curriculum committees were set up in a number of subject matter fields and many communities decided to continue this form of discussion by forming local groups.

Vocational Education

The vocational education program is directed mainly towards students who have had little or no opportunity to go to school.

Again this year the program combined basic academic subjects with training in those trades and skills most urgently needed by growing northern communities. The Sir John Franklin School at Yellowknife, principal training centre in the Territories, revised its system of course organization to provide more concentrated academic up-grading for vocational trainees, and much of the planning and development of a new mining course was completed. This large school with facilities for boys and girls offers courses in carpentry and building, auto and diesel mechanics, heavy equipment and food service. On-the-job training and placement are also arranged at technical institutes in southern Canada.

A follow-up survey was begun of more than 1,000 students who have received some form of training during the past eight years.

Adult Education

The adult education specialist appointed in 1960 organized a series of pilot projects, including simple English and arithmetic, that have met with an enthusiastic response. Eskimo men, especially those in wage employment, are keenly interested in acquiring a working knowledge of both to increase their earning capacity.

This year a specialist in adult education is being appointed for the Arctic District and surveys are under way throughout the Territories to determine in what directions the program should expand.

Student Residences

Hostels attached to the schools provide the answer to an acute education problem in the north—how to bring the children to school if schools cannot come to them. Student residences provide the means for giving children whose parents live remote from settlement, or in communities too small to justify a school, the same opportunity to learn as other northern children. In 1961 accommodation in student residences totalled 1,236 beds. Of these

1,100 were in the Mackenzie District, 136 in the Arctic District. In summer the children go home for the holidays as they do in southern Canada.

Engineering Division

During the year 1961-62, the Engineering Division continued to improve the design of prefabricated buildings for the north. A greater degree of prefabrication was achieved in housing designs by incorporating electric wiring and heating ducts into the building panels. Conversely, interior plywood lining of the houses was shipped separately for application in the field. Although this reduced prefabrication, it eliminated the type of shipping damage that had marred the interior of some previous designs. Improved design produced not only a better quality of buildings but structures more pleasing to the eye.

With the help of Inspection Services of the Department of National Defence, better control was exercised over prefabrication contracts. Inspection Services also assisted in inspection of vehicles and equipment prior to shipment north thus eliminating manufacturing shortcomings at source instead of at some remote Arctic destination.

A policy for supplying power to private consumers was implemented and a new policy, to provide water supply and sewage disposal to private consumers in the Northwest Territories at 50% of cost, was approved.

The final year of a three-year program of air survey photography and establishment of precise ground control was completed with the co-operation of the Department of Mines and Technical Surveys. Detailed topographic compilations of settlement locations were prepared and have already proved of much value in the preparation of community and land use plans.

Decentralization of administrative responsibilities to district offices in the north continued and procedures were improved.

Mackenzie District, N.W.T.

Expenditures on road construction in the Mackenzie District amounted to some \$2,410,000. Major contract work was handled for Northern Affairs by the Department of Public Works. Reconstruction of the Mackenzie and Hay River Highways continued and work was begun on the first 20 miles of the Ingraham Trail, east from Yellowknife towards MacKay Lake. Maintenance of the Mackenzie Highway System was taken over by the Department when construction was completed.

Expenditures on buildings and works in the Mackenzie District totalled about \$1,600,000. Construction of garages and other buildings for the highway maintenance camps was begun. Housing, warehousing, powerhouses and similar buildings were erected at other settlements and a number of existing buildings altered or renovated.

Investigations for possible water and sewer systems were carried out at Fort Norman, Fort Providence, Rae, Fort Resolution, Coppermine, Fort

Good Hope and Tuktoyaktuk and final designs for systems at the first three locations were begun.

Districts of Keewatin and Franklin, N.W.T., Northern Quebec and Churchill

Construction expenditures, confined mainly to buildings and works, totalled about \$2,300,000.

More than 100 low-cost, prefabricated houses were purchased for re-sale to Eskimos. These were sold at about \$1500 on site with the purchaser doing his own construction and aided by a \$1000 government subsidy.

One, two and three-classroom schools were purchased and erected together with houses, hostels, office buildings, warehouses, powerhouses, community freezers, bulk oil storage tanks and other facilities spread over many settlements in the Districts. Renovations and repairs were also carried out.

Preparation of detailed designs was begun on the Frobisher Bay Town-site Development. This work was carried out by the Department of Public Works on behalf of Northern Affairs, as was construction at Pangnirtung, Eskimo Point, Chesterfield Inlet and Churchill.

Yukon Territory

About \$4,300,000 was spent on road construction in the Yukon Territory. Major work was on the Watson Lake-Ross River road, completed to Mile 60, with clearing carried out to Mile 100. The Flat Creek-Eagle Plain road was completed to Mile 72 and a development road started from the Watson Lake-Ross River road towards the Nahanni Range. A mine access road being built from Tungsten, in the Nahanni Range, by Canada Tungsten Ltd., will link up with this road. Two-thirds of the cost of the mine access road is being paid by the federal government; one-third by the company. Reconstruction was continued of the Stewart Crossing-Dawson, Whitehorse-Keno, Boundary and Canol roads. New bridges were constructed at the McQuesten and Ogilvie rivers on the Stewart Crossing to Dawson road.

Building in the Yukon totalled about \$160,000. Largest item was the Forestry Administration Building in Whitehorse.

Roads to Resources

This cost-sharing program of resource development roads involves the construction, or improvement, of over 4,500 miles of road in all ten provinces. Contracts are awarded by the provinces and the Federal Government contributes 50% of the cost of construction up to a maximum of \$7,500,000 for each province. Terms of the various agreements with the provinces range from five to eleven years.

Contracts amounting to \$107,379,707 had been awarded up to March

31st, 1961. Expenditures by the provinces totalled \$72,148,080 to which Canada has contributed \$34,750,726. The Division continued to administer this program.

Industrial Division

The Industrial Division is responsible for encouraging economic growth, the development of renewable resources such as fish and sea mammals, and planning townsites and community services to meet population and industrial expansion. The program stresses Eskimo participation in the economic and social growth of Arctic areas.

Projects

Development projects increased in numbers and scope. Arctic sea food, caught by Eskimo fishermen, had a good year. The Port Burwell char fishery harvested a 14,000 pound catch and test netting was carried on to assess the feasibility of establishing a much larger seal fishery. At George River the fishery produced 13,500 pounds of Arctic char and the community sawmill cut 40,000 board feet of lumber for the construction of Departmental buildings and Eskimo homes.

A new co-operative fishery at Fort Chimo combined a 9,000 pound catch of Arctic char with 18,000 pounds of Atlantic salmon. In late winter an experimental logging project on the Koksoak River cut 2,000 logs. A sawmill has been purchased and milling operations will start in the summer of 1962.

At Richmond Gulf another new fishery went into production, handling char, sea trout and whitefish. Despite heavy ice that delayed arrival of supplies, the fishery, in less than a week, produced 450 pounds of sea trout fillets, 1,500 pounds of char and 2,000 pounds of whitefish.

The entire Frobisher Bay catch, 8,200 pounds of char, was bought up locally, leaving no surplus for shipment south. The fresh-frozen fishery in the Mackenzie Delta expanded operations and processed 25,000 pounds of whitefish.

The Eskimo co-operative at Cambridge Bay started a char fishery this year, thereby providing a source of supply of this choice fish for western markets. The 14,000 pound catch was frozen and flown out to Edmonton. A 48' Long-liner, sailed from Caraquet, N.B., to Great Whale River, P.Q., was used for the Richmond Gulf fishery and other resource-harvesting operations.

Technical information with market promotion and guidance, encouraged the production of carvings. Although purchase and sale are still handled mainly by the Hudson's Bay Company and the Canadian Handicrafts Guild, Eskimo co-operatives began to market more of the output. The production of Eskimo graphic art increased considerably. Cape Dorset placed on sale a series of 89 colour prints and some graphic art was produced at Povungnituk. New craft projects were initiated at Great Whale River, Port Harrison

and Baker Lake. Sealskin crafts—tapestries, birds, animals and men's wedge hats—continued to attract wide attention outside the Arctic.

At the request of one of the contractors, the management contract for the reindeer herd was cancelled and negotiations were in progress for a new contractor.

Area Economic Surveys

The series of surveys begun in 1958 was extended to Wager Bay, Repulse Bay and Southampton Island. Indications were that the area could support 15 additional families. Measures recommended to diversify and improve the local economy included food processing, char fisheries, handicrafts and the application of modern methods of trapping and resource harvesting.

Co-operative Associations

Six new Eskimo co-operatives began operations in 1961. This brings to fourteen the number engaged in commercial fishing, art and crafts, co-operative retailing, logging and housing. A group of Eskimos at Frobisher Bay made plans to establish the first Arctic housing co-operative and build 15 three-bedroom houses. A memorable event this year for the co-operatives was His Excellency the Governor General opening the 1961 exhibition of Cape Dorset graphic art at the Toronto Art Gallery. His Excellency is a patron of the West Baffin Eskimo Co-operative at Cape Dorset.

A Co-operative Development Officer was posted to the Western Arctic. The general volume of business handled by the co-operatives increased steadily.

Industrial Promotion

Industrial and business potential in the major communities of the Mackenzie District was studied and discussions held with the Board of Trade and members of the Town Council in Yellowknife, and local improvement committees at Inuvik, Hay River and Fort Smith. As a result, efforts are being made to expand service industry, and encourage local people to invest private capital in this field.

A study was completed, and is now under review of the feasibility of establishing a prefabricated housing development in the Mackenzie Delta to provide Eskimo housing and other residential requirements. The financial needs for development of industry and business in the Northwest Territories, and the provision of incentives, are being looked into. First steps were taken towards a buffalo by-products industry in the Fort Smith area to include tanning of hides and crafts made from buffalo horn and other materials found in the southern Mackenzie District.

Market promotion and research dealing with Eskimo products stressed the development of quality outlets for fine crafts and methods of bringing all northern products to a wider audience. Displays were held in major Canadian cities. Some were shipped abroad.

ESKIMO CO-OPERATIVES

- A. The George River Fisherman's Eskimo Co-operative, George River, P.Q. is engaged in commercial char fishing and logging operations.
- B. The Kikitoayak Eskimo Co-operative, Port Burwell, N.W.T. is engaged in commercial fishing and is also operating a Consumers Co-operative Store — Handicrafts.
- C. The West Baffin Eskimo Co-operative, Cape Dorset, N.W.T. is engaged in the production of graphic art, Consumers Co-operative Store, bakery and tourism.
- D. Ekallottiak Eskimo Co-operative Limited, Cambridge Bay, N.W.T. commercial fishing operation.
- E. Ikaluit Eskimo Co-operative, Frobisher Bay, N.W.T. commercial fishing.
- F. Sisi Eskimo Co-operative, House Building, Frobisher Bay, N.W.T.
- G. Grise Fiord Eskimo Co-operative, Consumers Co-operative Store, Grise Fiord, N.W.T.
- H. Resolute Bay Eskimo Co-operative, Resolute Bay, N.W.T. Consumers Co-operative Store.
- I. Coppermine Eskimo Co-operative, Coppermine, N.W.T. Producers Co-operative, Handicrafts.
- J. Holman Island Eskimo Co-operative, Holman Island, N.W.T. Producers Co-operative, Handicrafts.
- K. Fort Chimo Co-operative Association, Fort Chimo, P.Q. commercial fishing and handicrafts.
- L. Great Whale River Co-operative Association, Great Whale River, P.Q. Producers Co-operative, handicrafts and carvings.
- M. Povungnituk Co-operative Society, Povungnituk, P.Q. Producers Co-operative, carvings and handicrafts.



A Canada-wide research project tested the potential market for buffalo meat from Wood Buffalo and Elk Island National Parks. A supporting promotional program planned and carried out with the Editorial and Information Division, introduced Sweetgrass buffalo meat to Canadians from coast to coast.

Community Planning and Housing

Whitehorse, Dawson City and Rankin Inlet were among northern areas studied in the interests of land use and community development. The impact of the Great Slave Lake Railway on commercial fishing in Great Slave Lake was examined and preliminary plans discussed with mining companies for new communities at Pine Point and Tungsten. With Central Mortgage and Housing Corporation the Division drew up a metropolitan plan for Whitehorse and began investigation of Fort Simpson as the possible capital of the proposed Mackenzie Territory. A National Housing Act-subsidized rental apartment project, first of its kind in the north, was introduced in Whitehorse.

The Department initiated a program of first and second mortgages on low-cost housing in both Territories for home-builders unable to afford housing under the National Housing Act. Under this scheme the Federal Government made a \$360,000 loan to each Territory to provide first mortgages to the value of \$6,000 on each approved low-cost home. It also made available \$90,000 in grants to each Territory with which to provide interest-free second mortgages. This scheme generally parallels a program of loans and grants to Eskimos and Indians in the north and supplements Territorial programs for second mortgages up to \$2,000 on housing built under the Act.

Tourist Office

About 1,300 tourists visited the Northwest Territories—30 per cent more than in 1960—and spent an estimated \$60,000. Major event of the year from a transportation standpoint was completion of the Yellowknife Highway to Yellowknife. This increased both the flow of commercial motor traffic into the Territories and general interest trips. Most tourists were anglers, with a sprinkling of 34 buffalo hunters. In addition to three campgrounds and two picnic areas completed along the Highway last year, two new campgrounds and three more picnic sites were being built for the 1962 tourist season.

A fresh area was opened up to anglers by two new fishing camps on Great Bear Lake. A third camp was opened near Yellowknife. A colour film on sport fishing in the Mackenzie District, *Paydirt Angling*, is expected to lure many more anglers to try their luck in the North. Three tourist parties, two arranged as art tours, the other a group of Ontario teachers, visited Cape Dorset. Arrangements were made through the Northwest Territories Tourist Office and the West Baffin Eskimo Co-operative.

Sixty-three delegates attended the third annual conference of the Northwest Territories Tourist Association at Yellowknife in February. The Yellowknife Board of Trade operated a tourist information centre during the summer

and plans were discussed at the N.W.T.T.A. conference for an information centre at the Northwest Territories-Alberta boundary.

Resources Division

The Resources Division administers major resources—lands, minerals and timber—in the Yukon and Northwest Territories. Mineral and surface rights of certain lands under federal control in the provinces are also administered by the Division. It is responsible for recommending development and management policies for northern resources and drawing up plans for the program of development roads in the north.

The year was notable for the introduction of new regulations for the disposition of oil and gas rights, for growing interest in land and timber, and increased mining exploration.

Mining—Northwest Territories

Mineral claims recorded totalled 1,429. Of these 922 were in the Yellowknife District, 380 in the Mackenzie District, 127 in the Arctic and Hudson Bay District. Though staking work decreased exploration rose. The Canada Mining Regulations, promulgated March 3, 1961, provided for the issuance of prospecting permits. Twenty-seven permits, covering some 4,500,000 acres extending from the West Coast of Hudson Bay to the Yukon boundary, were issued.

The Nahanni Sixty Syndicate made an interesting silver-copper discovery in the Redstone River area and carried out an exploration program of considerable scope.

The Canadian Nickel Company continued to work north of the Arctic Circle and is reported to have made the year's most significant discovery on the west shore of Contwoyto Lake. The Company was active in the Salkeld Lake and McGregor Lake area. The Big Four (Byrne Interests) were active in the Gordon Lake, Fort Enterprise and Easter Islands area. Selco Explorations did considerable work west of Eskimo Point in the Eastern Arctic. On Little Cornwallis Island, Bankeno Mines did limited diamond drilling on a lead-zinc discovery made in 1960. Texas Gulf Sulphur Company have let a contract to drill the lead-zinc deposit on Strathcona Sound at the north end of Baffin Island. Work was done at the Camlaren Mine preparatory to hauling ore over the proposed winter road from Discovery to Tauranis. The Canada Tungsten Mining Corporation property in the Flat River area plans to go into production October, 1962.

Gold accounted for over \$14,000,000 of the year's total mineral production of \$19,900,000. This decrease from 1960 production of \$26,500,000, was attributed to closing of the uranium mine at Port Radium and reduced nickel and copper production at North Rankin Nickel Mines.

Plans were made to create a new mining district between the Mackenzie River and the Yukon border with the Mining Recorder's office at Watson Lake.

Preparatory to the establishment of a geological evaluation unit in the Division's mining section, reports of geological, geophysical and geochemical work were indexed and catalogued.

A program of dust and ventilation surveys in the mines was planned for 1962.

Mining—Yukon Territory

A total of 2,462 mineral claims were recorded; 1,642 at Whitehorse, 618 at Mayo and 202 at Dawson City, almost double the claims recorded in 1960. Greatest staking activity lay northwest of Watson Lake and north of Mayo.

A silver-lead-zinc occurrence near the headwaters of the Liard River about 100 miles northwest of Watson Lake was the most important find of the active season.

United Keno Hill Mines produced over seven million ounces of silver, 17 million pounds of lead and 12 million pounds of zinc. New ore development kept the company's ore reserves about the same as in 1960.

Yukon Consolidated Gold Corporation operated six dredges on Hunker, Dominion and Sulphur Creeks, producing gold to the value of \$1,904,000.

Dominion Explorers acquired the copper property of Johobo Mines around Kathleen Lake, southwest of Haines Junction, and did extensive underground development work. During the year 2,500 tons of high grade copper ore were shipped from this property to Japan. Yukon Coal Company produced 7,000 tons of coal, a slight gain over 1960 production.

To offer better service to prospectors and mining companies operating out of Watson Lake, the Watson Lake Mining District was established, covering the southeast portion of the Yukon Territory. The Mining Recorder's office is at Watson Lake.

Value of mineral production in 1961 is an estimated \$12,986,911. Silver accounted for more than half this total.

Mine rescue training courses were conducted by the Mining Inspector and work begun on the preparation of safety regulations for industries other than oil well drilling and mining.

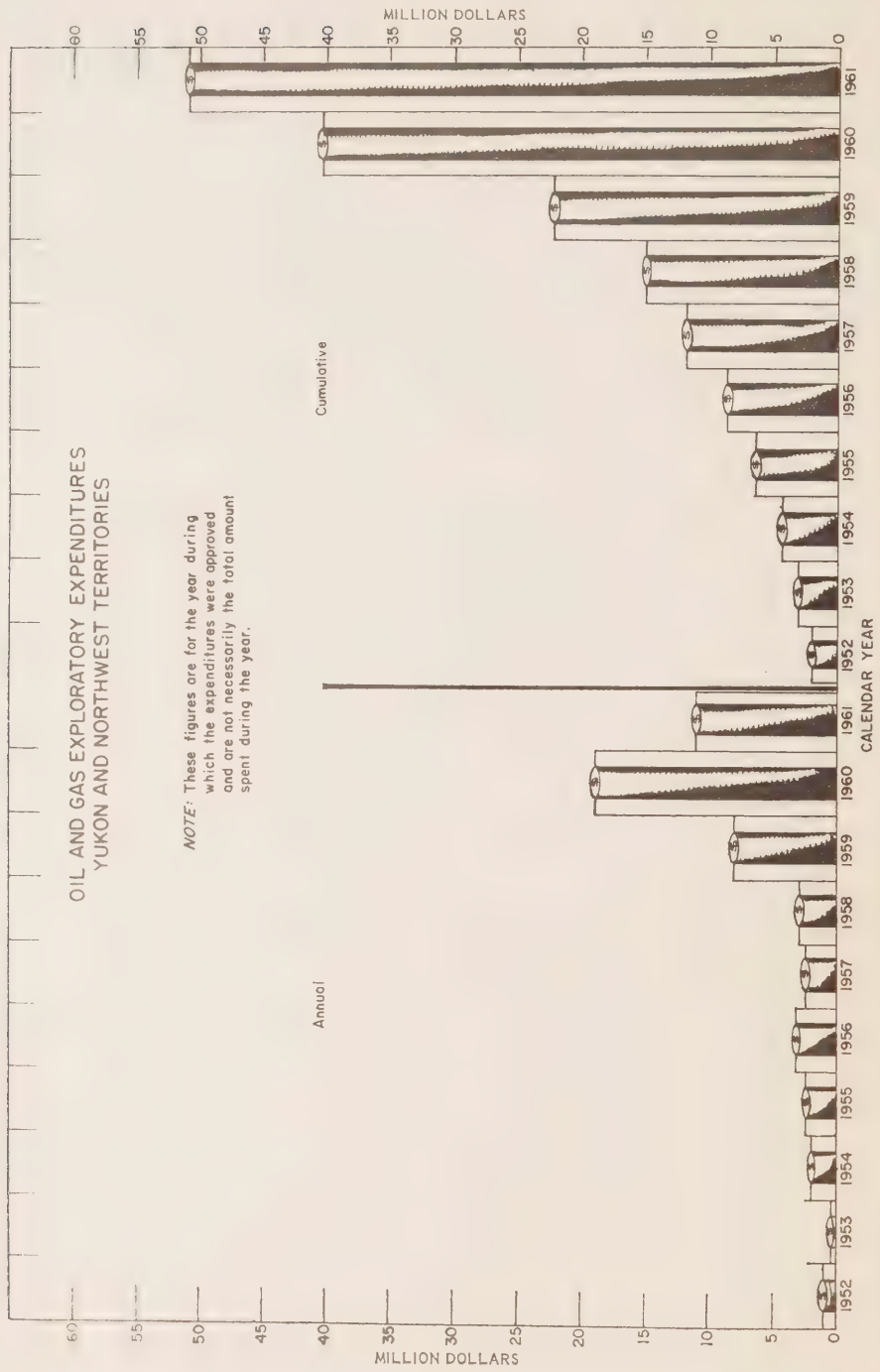
Oil and Gas—Northwest Territories and Yukon Territory

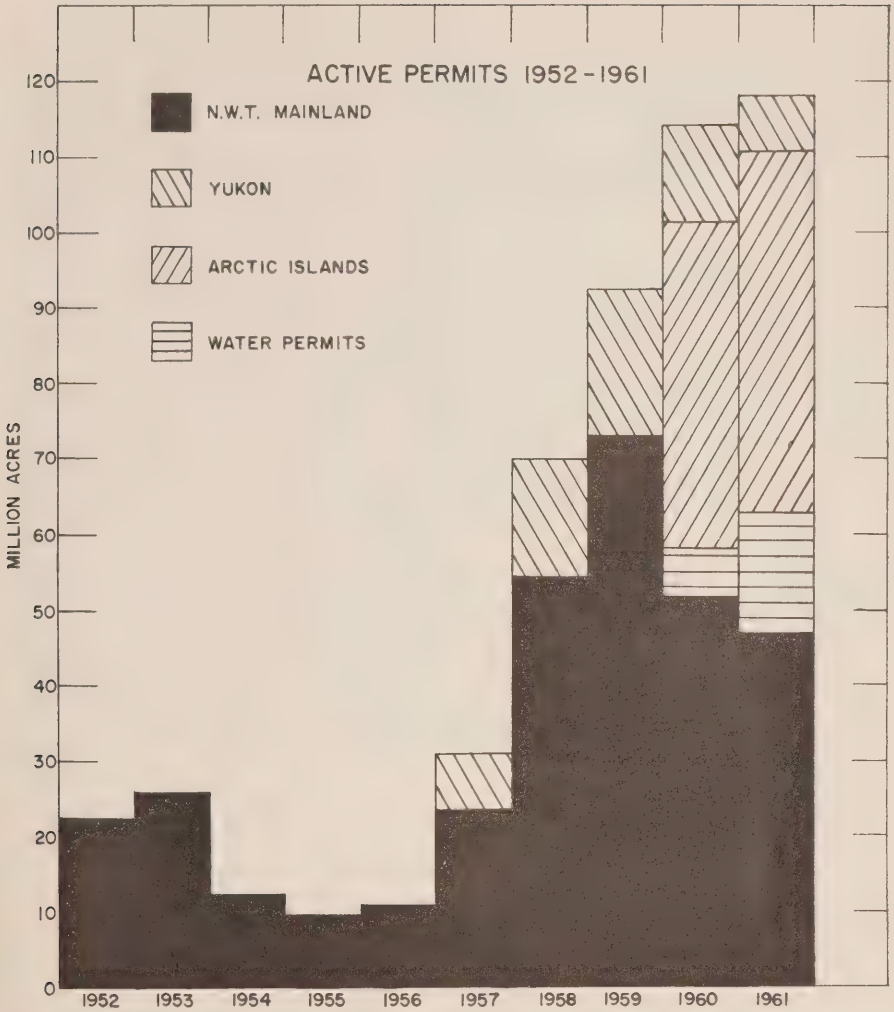
Oil and gas permits covering 12,110,376 acres in the Queen Charlotte Islands were issued in August, largest acreage issued to one company in 1961. A total of 374 permits covering 21,400,932 acres were issued during the year; 4,203,055 acres on the Northwest Territories mainland, 691,185 acres on the Yukon mainland, 3,838,454 acres in the Arctic Islands and 12,668,238 acres on the continental shelf in the Queen Charlotte Islands. Two sales were held from which 28 permits covering 1,481,314 acres were issued.

Major event of the year was the drilling of Canada's first well in the Arctic Islands, *Dome et al Winter Harbour No. 1* on Melville Island. After

OIL AND GAS EXPLORATORY EXPENDITURES
YUKON AND NORTHWEST TERRITORIES

NOTE: These figures are for the year during
which the expenditures were approved
and are not necessarily the total amount
spent during the year.



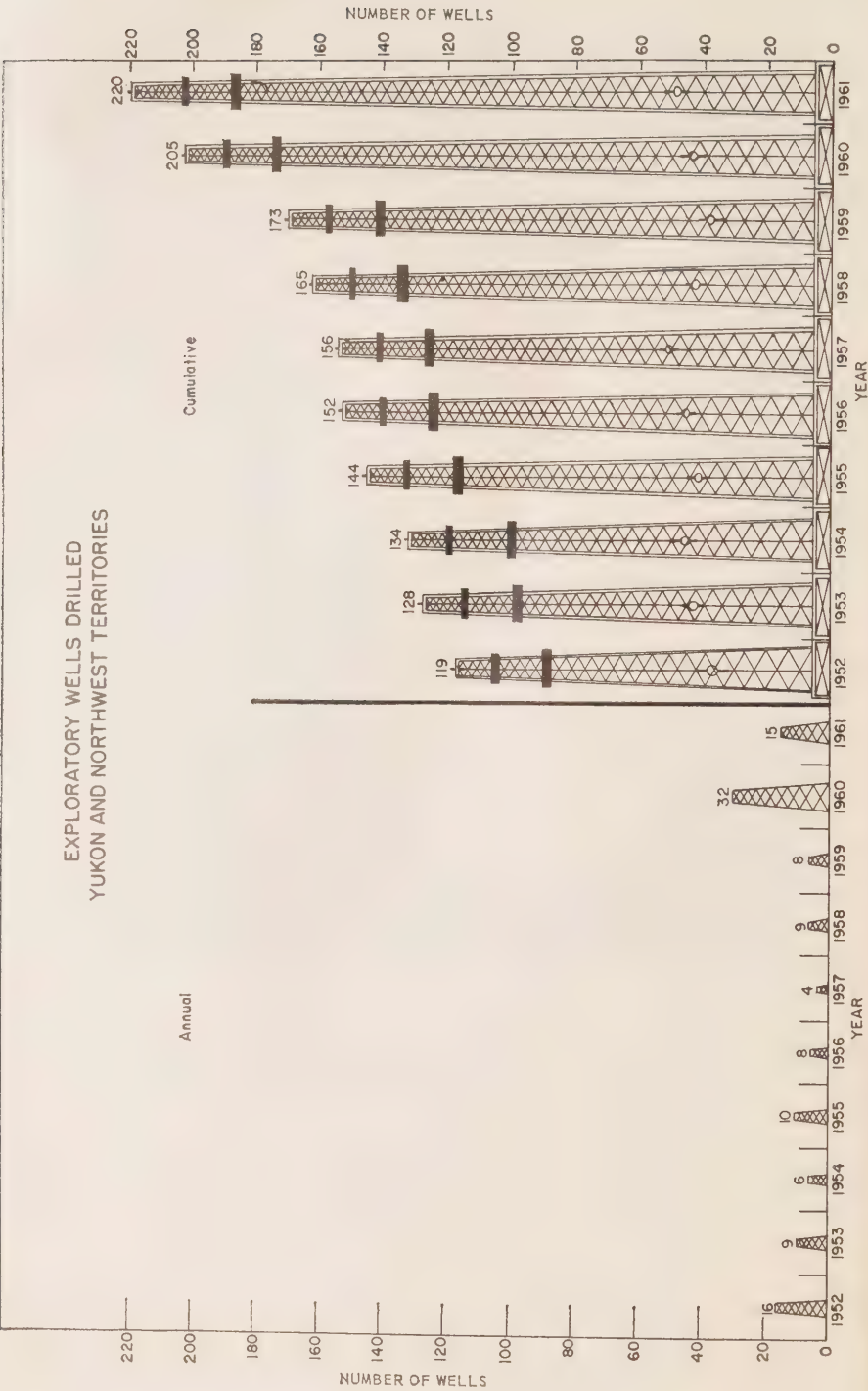


spudding in on September 10th, it reached its total depth of 12,543 feet during seven months of continuous drilling. Throughout the Territories 15 wells were completed during the 1961 season.

Twenty geological surface mapping parties worked in the Arctic Islands, eight more than in 1960. Seventeen seismic crews were at work at one time on the mainland. Revenue for 1961-62 showed a slight decrease. Exploratory expenditures totalled \$12 million.

Oil and Gas in the Provinces

As a result of two competitions held for 18 parcels of land in Alberta, 12 leases were issued covering 1,927 acres. Royalties were received from 8 wells in Manitoba, 9 in Saskatchewan, 13 in Alberta.



Lands—Yukon Territory

Disposition and administration of land were decentralized to the Yukon Territory to provide better service through improved procedures. A similar transfer is planned for the Northwest Territories.

Growing interest in arable land led to formation of an interdepartmental committee made up of representatives of the Department of Agriculture and the Economic and Resources Divisions of Northern Affairs and National Resources. It expects to report in June, 1962.

Demand for land in the Yukon required the provision of additional subdivisions at Whitehorse, Porter Creek, Watson Lake, Beaver Creek, Pelly Crossing and at Mile 55 of the Whitehorse-Mayo Road.

The value of lands for which letters patent were issued totalled \$58,023.69 of which \$9,018.95 is accounted for in this report. The balance, \$49,004.74 represents revenue from lots sold by the Yukon Government in subdivisions under its management. The sharp increase in requests for legal surveys required the planning of a second field party for the 1962 season.

Twelve parcels of land were purchased, or otherwise acquired, by the Division and parcels reserved for the use of the Governments of Canada and Yukon Territory.

Lands—Northwest Territories

Land sales were active and leases in force rose some 25% over the previous year.

News of the construction of the Great Slave Lake Railway has had a marked effect on public interest in land at Hay River and Enterprise. Few of the 80 residential lots made available at Hay River last summer are vacant and in 1962 an additional subdivision, to provide some 150 lots, will be surveyed. An addition to Enterprise of about the same size is contemplated. Surveys are also planned for new subdivisions at Nahanni Butte, Norman Wells, Fort McPherson and Coppermine, and substantial additions to subdivisions at Fort Smith and Fort Simpson.

Ninety parcels of land were set aside for departments and agencies of the Federal Government and 18 acquired by the Division for use of Northern Affairs. At the request of the municipality of Hay River, a monthly list of all changes in the ownership of patented lands is being provided. This service, already available to Yellowknife, will assist Hay River in making prompt revisions to local assessment rolls.

Public Lands

Public lands administered by the Division comprise lands previously administered by other federal departments, former Dominion Lands reserved from transfer to the western provinces which have reverted to departmental control when no longer required, and former Ordnances and Admiralty re-

serves. Under the Public Lands Grants Act and Regulations the lands are used in the public interest and on a revenue-producing basis when possible. Indexes of all lands and buildings administered by the department are maintained by the Public Lands Section, for submissions to the Crown Lands Registry, and the Municipal Grants Division of the Department of Finance.

During the fiscal year 1961-62, five parcels of land were transferred to the Division by other Departments, and six tracts transferred to provincial control. A post office site was conveyed to the Public Works Department and six properties reserved for future dedication by the National Parks Branch as historic sites. Five easements were granted for public utility installations, 11 sales completed, two assignments recorded and nine appraisals carried out. Thirty-four agreements of sale and 83 leases are in force. Replies were sent to about 1,100 enquiries regarding land tenure, many from non-Canadians interested in settling in Canada.

Net revenue received totalled \$50,908.69.

Canol Pipelines

The Canadian section of the 4-inch pipeline, including the pipeline from the Alaska-British Columbia boundary to Whitehorse, and half the Canol Tank Farm at Whitehorse, were sold to The White Pass and Yukon Corporation for \$125,000.

The 3-inch pipeline, Canol No. 4, from the Whitehorse Tank Farm to the Yukon-Alaska boundary at Mile 1221 on the Alaska Highway, is being offered for sale by public tender through Crown Assets Disposal Corporation.

Sale of Canol No. 2 and Canol No. 4, will complete disposition of Canol facilities acquired by Canada from the United States in 1960.

Dominion Land Records

Dominion Land Records cover administration of lands, timber, mining and grazing rights in Western Canada, the Railway Belt and Peace River Block of British Columbia from 1873 to 1930, when natural resources were transferred to the provinces. Records include school lands, colonization and soldier settlements, grants, Indian Reserves, National Parks, forestry sites and other lands reserved for the Federal Government. Over 2,600 title deeds are registered and thousands of assignment for transfer documents recorded.

One hundred and three certified true copies of letters patent were prepared on request, and 6,149 parcels of land transferred to the Province of Manitoba as Swamp Lands or under Railway Warrant, were indexed. Seventeen historical research projects were completed, 42 title searches carried out and 1,965 parcels of land re-vested in the Crown for Federal purposes, were recorded. Some 750 enquiries relating to land dispositions, mineral rights, seed grain and timber privileges were dealt with.

Forests

The Division is responsible for forest management and protection in the Yukon and Northwest Territories and Wood Buffalo National Park. Territorial Timber Regulations were completely revised preparatory to re-enactment in October 1962.

Yukon

Fifty forest fires burned a total of 95,276 acres compared with 49 fires and 21,102 acres in 1960. Campers caused 60 per cent of the 1961 fires; 12 per cent were caused by lightning. The 1961 fire season was favourable inasmuch as only 200 acres were burned in accessible areas. Fire-fighting costs totalled \$36,853.

Timber cutting continued at about the same volume as in 1960. A drop in lumber production was offset by increased use of round timber.

Mackenzie District—Wood Buffalo Park

One hundred and sixty-seven fires burned 750,000 acres compared to 92 fires and 101,682 acres in 1960. A dry spring and summer resulted in one of the worst fire situations on record. Firefighting costs totalled \$208,000. Sixty per cent of the fires were caused by lightning, 20 per-cent by campers. Water bombing was used for the first time and proved effective.

Lumbering operations continued at the same volume as in 1960.

Seed Grain Indebtedness

Between 1876 and 1925 the Federal Government advanced seed grain, livestock fodder, and other relief to needy settlers in Western Canada. In return liens were registered against their homesteads. All British Columbia and Manitoba accounts were discharged long ago, and Seed Grain Advisory Boards were appointed to investigate outstanding liens registered against lands in Alberta and Saskatchewan. In May 1960, approval was granted to discontinue negotiations for compromise settlements, and cancel the Federal share of indebtedness. Alberta and Saskatchewan concurring, agreed to cancel their share. During 1961-62, the balance of Saskatchewan liens was written off and an accelerated program of submissions to the Governor General in Council carried out by the Alberta Seed Grain Advisory Board. A total of 518 liens, representing \$22,757.52 principal and \$67,472.70 interest, were cancelled. Indebtedness in respect of Alberta Dominion-Provincial accounts amounting to \$60,029.23 principal, plus \$108,085.60 interest, was due to be processed shortly.

Territorial Division

An event of great significance to the Northwest Territories, and to all Canada, was the passing of a resolution by the Council of the Northwest Territories recommending to the Federal Government the division of the Northwest Territories into two separate territories in 1964.

The Council met twice during the year, at Fort Simpson and Ottawa. Principal legislation passed was the Financial Agreement Ordinance setting out the financial arrangements under which the Northwest Territories will operate during the next five years. Under the Agreement the Territorial Government assumed greater responsibility in fields such as police services, administration of justice and provision of water and sewer systems and community roads.

The Child Welfare Ordinance, passed at the July session, coordinated existing legislation and placed authority for operation of the child welfare program with the Superintendent of Child Welfare. Other legislation passed dealt with low-cost housing and granting of franchises to the Canadian National Railway to install and operate telephone systems at Fort Simpson, Inuvik, Rae, Fort Resolution and Fort Providence.

As an advisory service to the Commissioner the Division dealt with such matters as game management, municipal affairs, labour legislation, health and hospital services, vital statistics, taxation, liquor administration, professional and business licenses, motor vehicle control and other business normally handled by a provincial civil service.

The Commissioner's annual report, published separately, gives a more detailed review of territorial affairs.

Welfare Division

The Welfare Division provides services to residents of the Northwest Territories on behalf of the Federal and Territorial Governments and to Eskimos in Arctic Quebec and Churchill, Manitoba.

The Ottawa office comprises three sections: Family, Rehabilitation, and Linguistic Services. Family Service includes public assistance, child welfare, correction and medical services. Rehabilitation is responsible for rehabilitation centres at Frobisher Bay and Inuvik. The Linguistic Services translates correspondence and other material into, and from, the Eskimo language, prepares publications, and is developing an Eskimo orthography.

Public Assistance

The Department administers Family Allowance payments on behalf of the Department of National Health and Welfare, assistance and relief programs on behalf of the Territorial Government, and Eskimo relief. It takes part, too, in the low-cost housing program. This year arrangements were completed to change from in-kind Family Allowance payments to Eskimos to payments by cheque. Fewer than 1% of Eskimo accounts had to be administered through inability to handle cheques—a rate that compares well with the rest of Canada. A budget deficit system of calculating relief payments, based on the cost of living in each settlement, was developed. At some settlements housing was provided for families unable to support themselves.

Child Welfare

The Department operates a child welfare program that provides non-ward care for Eskimo children, and administers the Child Welfare Ordinance on behalf of the Territorial Government. The Ordinance, enacted July 1961, widens the scope of the program to include the study of adoption applications and services to unmarried parents. A Children's Receiving Home was opened at Fort Smith and one is under construction at Yellowknife, in addition to homes at Frobisher Bay and Churchill.

Medical-Social Services

This program aids Eskimos in hospital away from home. Patients are kept in touch with their families, and families receive news of the progress the patient is making. This service is made possible through a system of continuing reports to and from hospitals, the interchange of tape-recorded messages, and photographs. This very human service does much to offset fears and homesickness, and speeds recovery. Home conditions are studied before patients are discharged to ensure that families can care for them adequately. Discharged patients receive clothing and prosthetic appliances whenever these are needed.

Arrangements were completed with the Department of National Health and Welfare to transfer responsibility to Northern Affairs for patients returning home after treatment. This took effect April 1, 1962.

Rehabilitation Service

In the north people from every ethnic group suffer from some form of physical or psychological handicap, for they may be socially disabled through the effects of cultural change or economic dependency.

The northern rehabilitation program is both remedial and preventative. The remedial side strives to restore economic self-reliance to those disabled by illness. The preventative program extends aid through work relief projects and handicrafts marketing. The object of both is to reduce dependency and restore the disabled to usefulness.

One preventative measure—the handicrafts program—is operated along cottage industry lines. More than 20,000 craft items were bought in the Eastern Arctic for resale last year, with a purchase value of about \$83,000.

Rehabilitation Centres

The two main Centres are at Frobisher Bay and Inuvik and both serve people of all ethnic groups. The Frobisher Bay Rehabilitation Centre serves Baffin Island and Eskimos from Arctic Quebec; the Inuvik Centre serves the lower Mackenzie District.

The Centre at Frobisher Bay had a population of 119 rehabilitants at the start of the fiscal year. Seventeen were later discharged to their own homes or to employment. The Inuvik Centre, a far more recent project, cared for 29 people.



The Centres are planned like villages and include single living quarters, individual family housing units and workshops for a variety of projects. They are designed to offer a controlled experience in community living, and training in many skills. Thus, they act as stepping stones in the cross-over from one social and economic way of life to another.

Community Assistance

A start has been made on community assistance. As staff is available, more studies will be made of social groupings. A program of northern service assistants, to co-ordinate with auxiliary workers of other agencies, is well advanced. Indians, Eskimos and Metis will be trained to fill these positions. Consultation and aid will be available to Eskimo Councils. *Quajivaallirutissat*, the Q-Book, prepared in the Welfare Division, will be sent north in 1962. The Q-Book will include information in Eskimo on just about everything—education, health, welfare, equipment maintenance, household hints, government services, and laws.

Linguistic Service

A seven-week seminar was held at Churchill, in July and August, to continue research on the preparation of a standard Eskimo orthography. Eskimos taking part were drawn from 14 Arctic dialect areas. Most of them learned to read and write their dialect in the tentative standard orthography without difficulty, except for Eskimos from the Mackenzie region whose dialects are now under further study. Research, so far, makes clear that differences between Eastern and Western dialects are small. The new Roman system of writing should be in effect in 1962.

An Eskimo-English translation service is provided for the Branch, and other agencies as required, particularly Northern Health Services and the CBC. Eskimo staff act as interpreters for Eskimo patients in hospital and for Eskimo delegates when they attend meetings in southern Canada.

Canada's first Eskimo language magazine, *Inuktitut*, published two issues this year for readers in the eastern Arctic. *Inuktitut* means *The Eskimo Way*, and its editor is on the Eskimo staff of the Welfare Division.





National Parks Branch

The National Parks Branch is responsible for planning, developing, and operating Canada's National Parks and National Historic Parks and Sites, and through the Canadian Wildlife Service, for administering the Migratory Birds Convention Act.

The structure of the Branch consists of the Director's office,

which includes the Planning, Education and Interpretation, Fortress of Louisbourg Restoration, and Administration Sections, and four Divisions:—the National Parks Service, the National Historic Sites Division, the Engineering Services Division and the Canadian Wildlife Service.

Office of the Director

In May, following the announcement by the Prime Minister, the National Parks Branch launched a long-term program to restore a portion of the 18th century French Fortress of Louisbourg, which was demolished after its capture by British forces in 1758.

With the objective of providing a major historical attraction that will stimulate the economy of Cape Breton Island and offer immediate employment for men thrown out of work by the closing of coal mines, work began immediately on the project. The most extensive restoration project being carried out in North America, the Fortress of Louisbourg Restoration will be carried out over a period of at least 10 years, although the greater part of the work is to be completed by 1967, Canada's Centennial Year.

During the year, the Fortress of Louisbourg Restoration Section was established. The Chief of the Engineering Services Division was made responsible to the Director for co-ordinating the restoration work and an Acting Project Manager designated to supervise operations on the site. Ronald Way, Director of the Ontario Government historical restorations of Fort Henry and Upper Canada Village, was appointed consultant to the restoration.

The first year of the project was occupied largely with the preparatory work that was a necessary preliminary to the commencement of restoration. A historical research staff was assembled and conducted research in Canada, England and France on the architectural and structural details of the original buildings and fortifications of Louisbourg. Construction began of the 11-building work compound that will serve as section headquarters, service roads, staff housing and a concrete core wall that will protect the site of the Royal Battery and the surviving sections of the original French sea wall.

The Planning Section studies the parks individually, and as a whole, and

prepares development plans for each within the larger framework of the national parks system. The work of the Section combines long-range planning with advice on immediate problems. The aim of management policy is to ensure that development remains consistent with national park purposes and that it contributes towards the recreation resources of Canada as a nation.

During the year extensive field surveys were continued in the major parks as an aid to long-range planning. Development plans were produced, or carried forward, for visitor service centres at Lake Louise, Banff National Park; Waskesiu Lake, Prince Albert National Park; and Ingonish Beach, Cape Breton Highlands National Park; as well as other areas. A long-range development plan for Point Pelee National Park was completed. Policy studies were made on winter recreation and ski developments and preliminary studies on zoning and wilderness areas. Consultants were retained to examine the implications for Banff of the 1968 Winter Olympics, if Canada's bid is successful. Background studies were prepared for the Resources For Tomorrow Conference.

One interesting event this year was the appointment of seasonal park naturalists to several parks ensuring for the first time that good natural history interpretation was available to visitors. Those who took advantage of the new service welcomed the opportunity to recognize values in a national park more lasting than those associated with a casual visit. The Education and Interpretation Service had a productive year in promoting this concept of park values through a variety of publications. A total of 923,500 copies of 44 publications were provided for use of the National Parks Service and 367,400 copies of 16 publications for the Historic Sites Division. A new publication, *Canada's Heritage of Nature*, went into a second printing of 25,000 copies before the end of the year and a French edition was in preparation.

ATTENDANCE AT NATURE TRAILS IN NATIONAL PARKS 1961

	<i>Total Park Attendance</i>	<i>Attendance at Nature Trails</i>	<i>Per Cent Attendance</i>
Jasper	332,000	3,200	.97
Banff	1,038,000	9,000	.87
Prince Albert	140,000	2,400	1.7
Kootenay	498,000	6,500	1.3
Pelee	527,000	8,900	1.7

Average attendance—1.3 per cent of all parks visitors.

Film libraries, each containing a print of 22 titles, were established in ten parks. It is planned to equip all parks with a film library and increase the number of prints. One new production, *Away From It All*, was made for the Branch in Terra Nova National Park, Newfoundland, by the National Film

Board. It won a Chris Award at the Columbus, Ohio, Film Festival in September 1961 for excellence of production.

Work was started on two new films, one dealing with wildlife in the national parks and the other to illustrate the principle of nature preservation on which the parks were established.

A prototype of an interpretative sign, to be used to identify outstanding natural features in the parks, will be placed at the Cave and Basin Pool in Banff to mark the birthplace of Canada's national parks. A naturalists' workshop and training course was held in June at Banff.

National Parks Service

A milestone in national parks development was reached July 15, 1961, with the official opening of Terra Nova National Park in Newfoundland by Hon. Walter Dinsdale, Minister of Northern Affairs and National Resources.

Another noteworthy event of the year was the formal dedication, June 28, of the Anglin Lake dam in Prince Albert National Park by Prime Minister John G. Diefenbaker. This dam was built by the Government of Canada in 1960 to regulate the flow of Spruce River in Prince Albert Park and to provide water for the improvement of Emma Lake, which lies outside the Park, for recreational purposes.

The choice of Banff by the Canadian Olympic Association as the site for the 1968 Winter Olympic Games—if the Games are held in Canada—was an interesting development. The selection was based on a study of several suitable sites, made for the Association by a firm of consulting engineers. The Government made a \$10,000 grant to the Association to facilitate the study. The final decision on what country will stage the Games will not be made until 1963.

An important step in national parks administration was a town-planning study of Banff Townsite undertaken by Dr. H. P. Oberlander of Vancouver, B.C. This study resulted from recommendations contained in the report of the Institute of Local Government, Queen's University, made for the Department in 1960.

The town-planning study was undertaken primarily for the purposes of preparing a long term plan for Banff Townsite and to ensure orderly and systematic development in keeping with national parks concepts and ideals. The consultant was asked to give particular attention to zoning, townsite beautification, and the provision of facilities appropriate to visitor needs. Requirements of local residents for community purposes were examined with special reference to schools, recreational centres, and sites for business and residential buildings. The consultant also prepared a report assessing the possible impact of the Winter Olympic Games on Banff if they are held in Canada.

Canada's national parks continued to attract increasing numbers of

visitors. Attendance increased 11 per cent to a record high of 5,491,663 visitors. At Cape Breton Highlands, Fundy, Prince Edward Island, Waterton Lakes and Yoho, attendance rose by more than 30,000 visitors.

Camping was as popular as ever. The demand for campsites required extensions to existing campgrounds and the construction of new ones. A total of 398,798 campers registered at serviced campgrounds for an estimated 1,362,644 camper days—14 per cent more than in 1960. In addition, an estimated 125,000 visitors made use of the semi-serviced campgrounds. In co-operation with private enterprise, the Department continued to improve facilities for visitors and residents throughout the system. One hundred building permits were issued in Banff National Park for a total value of \$2,155,291. One of the most important permits was for an eight-sheet curling rink that was opened in March, 1962, as the first phase of the Civic Centre Development. In Jasper National Park, 94 building permits were issued having a total value of \$467,946. A large share of this amount was made up by the estimated cost of building eight new guest cabins at Jasper Park Lodge.

Title to additional freehold lands was acquired in Banff, Jasper, Kootenay and Point Pelee National Parks. The acquisition followed the policy of purchasing privately-owned lands which lie within the boundaries of some of the parks as opportunity and available funds permit. One such transaction resulted in the acquisition of title to the last remaining freehold land in Jasper National Park.

Regular maintenance was carried out during the spring and summer season on trails, picnic areas, campgrounds, scenic roads and other park facilities. Considerable work was undertaken to continue reconstruction of highways.

The Banff-Jasper Highway (Banff and Jasper National Parks)—The contract for the Big Hill Section (6.3 miles) was 88 per cent completed and the Nigel Creek Bridge was 75 per cent completed with decking still to be placed. An asphalt-bound base course was laid from a point two miles south of Sunwapta Pass north to Jonas Creek. Also, the new grade was completed from Jonas Creek to a point roughly forty miles from Jasper. Guide rail was installed along Miles 44-47. The program of slope stabilization and seeding was continued. A cairn, erected on the boundary of Banff and Jasper National Parks, was unveiled on August 3, 1961, to mark the reconstruction of the highway.

The Banff-Windermere Highway (Kootenay National Park)—Ideal weather favoured reconstruction progress from Mile 56 to 62 and the basic grade was completed. Ten thousand feet of guide rail was installed between Marble Canyon and the Banff park boundary. Fringe clearing and slope seeding were continued. On August 12, 1961, a ceremony was held near Vermilion Crossing to commemorate reconstruction of the Banff-Windermere Highway. The Minister of Northern Affairs and National Resources unveiled the cairn to this project.

The Cabot Trail (Cape Breton Highlands National Park)—Completion of paving of the Cabot Trail was marked by a ceremony held in the park near Corney Brook, July 18, 1961, at which the Minister officiated.

Final paving of the Trans-Canada Highway in Banff National Park was carried out under two contracts and the work 55 per cent completed from Mile 14 to Mile 51. A traffic interchange at Mile 14 was nearly finished. Back sloping and slope seeding were continued.

Reconstruction of the Maligne Lake Road proceeded and began on the Jasper-Edmonton Highway in Jasper National Park, and the Mount Revelstoke access road in Mount Revelstoke National Park. A decision was made to build a new scenic road in Prince Albert National Park that will eventually circle Waskesiu Lake.

Development of campground facilities was continued in Riding Mountain, Jasper, Fundy, Cape Breton Highlands, Prince Edward Island and Terra Nova National Parks. A study by a firm of consulting engineers was made for a marina in Prince Albert National Park. The development, which will provide much-needed accommodation for pleasure boat-owners, was begun as part of the Winter Works Program.

Other large projects included completion of repairs to the Cave and Basin Pool and reconstruction of the Upper Hot Springs pool and bathhouse. The reconstruction of Banff Avenue in the Banff Townsite was completed. A new maintenance garage building was built in Elk Island National Park. A large service garage, workshop, stores and twelve-bay storage building for vehicles was constructed in the Rogers Pass area of Glacier National Park and a Snow Research Observatory with ancillary buildings was erected on Mount Fidelity in Glacier National Park for use of the avalanche warning establishment. A combined kitchen, dining-hall and bunkhouse building was built in Yoho National Park. Installation was begun of a new water and sewer system in Wasagaming Townsite at Riding Mountain National Park.

Development of Terra Nova National Park was continued with construction of campgrounds, picnic areas, and trail systems. Interior roads were paved, an information building completed, and an administration building at the bungalow camp development was begun. It was decided to re-build the section of the Eastport road that lies within the park and clearing was started under the Winter Works Program.

Among Winter Works projects carried out in the parks were the construction of small buildings, clearing of rights-of-way, timber salvage, campground development and sewage installations. The program, financed by supplementary estimates, created some 5,300 man-months of employment.

More visitors than ever were to be found at golf courses, beaches, tennis courts, bowling greens, ski areas and other recreation facilities. Opening of the Banff Curling Rink was the main event in local winter activities. Nature trails, film showings and talks by park naturalists and interpretative officers were enjoyed by many visitors.

To protect natural grazing areas, over-abundant wild animal populations were reduced in Banff and Elk Island National Parks. During the year 197 elk and 230 buffalo were cut out. Meat and hides from the elk reduction at Banff were sent to the Northern Administration Branch of the Department and the Indian Affairs Branch of the Department of Citizenship and Immigration for distribution to Eskimos and Indians in need. Buffalo meat from Elk Island was combined with buffalo meat from Wood Buffalo National Park for public sale by the Department.

The forest fire season was one of the most severe in recent years in the parks and all experienced extended periods of extreme fire danger. Restrictions on public travel in danger areas were imposed for periods of up to two weeks in several parks. In 1961, sixty-three forest fires burned 45,560 acres of national park lands. Direct costs of fire-fighting operations amounted to approximately \$110,000. Of the sixty-three fires, lightning accounted for 14, smokers caused 15, seven originated from camp-fires, 10 were believed to be incendiary, and the remaining 17 caused by a variety of human activities.

In August and September the services of one chief warden and six wardens were made available to the Province of Newfoundland to assist in forest fire control operations. Fire fighting equipment, including pumps and hose, was also made available on loan.

In December a conference of the western park superintendents was held at Banff. This provided an excellent opportunity for superintendents and Head Office staff to discuss common problems and introduce a number of improved procedures. Park warden training classes and conferences were conducted and in addition to annual refresher courses held in most parks, general training, mountain climbing and rescue, and ski and avalanche rescue schools were held in Banff for wardens from the western parks.

Canadian Wildlife Service

Waterfowl breeding conditions and waterfowl populations were again studied with all the provinces and territories and the U.S. Bureau of Sport Fisheries and Wildlife. Factors affecting the production and survival of some species of ducks were investigated in detail, and the problem of waterfowl damage to crops continued to receive attention.

Waterfowl kill surveys were conducted by mail in Quebec, Ontario, New Brunswick, and Prince Edward Island. Waterfowl bag checks were also carried out in other provinces to obtain information on hunter success during the hunting season.

Spring counts of woodcock were made in the Eastern Provinces and status of the species was studied. The migration of snipe was studied in Eastern Canada during 1961; data resulting from those studies will form the basis of continuing investigations. Spring surveys of mourning dove were made in the Western Provinces and Ontario.

Among investigations carried out was waterfowl concentrations in the eastern Arctic. Ground studies were made in the Dewey Soper Bird Sanctuary and data obtained on the breeding biology and food habits of, and effects of predators upon, brant, snow geese, whistling swans and white-fronted geese.

Bird banding programs were continued and 148,085 records of banded birds were received and processed.

The Service continued to administer the Migratory Birds Convention Act in conjunction with the Royal Canadian Mounted Police and in co-operation with provincial Game Branches.

Seven new Migratory Bird Sanctuaries were created—one in Ontario, six in the Northwest Territories—bringing Canada's total to 108 sanctuaries with an area of about 39,600 square miles.

Mammal research was conducted in the national parks and the Northwest Territories. In the parks, studies were concerned principally with the biology and management of such big game species as elk, moose, bighorn sheep, grizzly bear, and bison. Beaver were studied, too.

Intensive studies of disease and parasites among bison in Wood Buffalo National Park were continued and complemented by similar studies in Elk Island National Park. Other disease and parasite studies included muskrats from the Yukon and northern Mackenzie District, Arctic foxes from Cornwallis Island and the District of Keewatin, and waterfowl. A study of the distribution and extent of radioactive fallout in members of the deer family in Canada was begun.

The joint research program to determine the effects of small mammals on forest regeneration was continued in Alberta, and studies of barren ground caribou reproductive physiology, behaviour, and range conditions were extended in the north. Related studies of the biology and predation effects of wolves continued in the Mackenzie District. In the eastern Arctic studies of the arctic fox are attempting to discover the reasons for large fluctuations in the population level.

Studies were continued, also in the eastern Arctic, of polar bear biology, numbers, and utilization to provide a basis for sound management policies. An aerial survey to determine numbers and distribution of Peary caribou, muskoxen, and other animals was carried out over the Queen Elizabeth Islands.

Many fishing waters in the mountain national parks have been made more accessible in recent years through construction of new highways and trails, and limnological surveys have been carried out to assess their suitability for trout.

Studies on the adaptation of salmon, splake, and golden trout to these cold mountain waters were continued. Five lakes in Jasper and one in Banff National Parks were treated with fish toxicants to eliminate minnows and suckers. Assistance was provided in the collection of cutthroat trout eggs at Lake O'Hara and Baker Lake but results were poor.

Limnological studies included fish culture operations, incubation of trout eggs in stacked trays, feeding fry and fingerlings with dry feeds, and methods of fish transportation.

An extensive program of tagging pike and walleye for later identification was started at Lake Waskesiu in Prince Albert National Park. This is part of an investigation on spawning migration of those species of game fish, and on the contribution of the spawning run to the game fish population in Lake Waskesiu. The program will go on for several years in the hope that a large enough number of fish can be tagged to provide reliable data for statistical analysis.

Limnological surveys were continued in Riding Mountain National Park with the aim of developing new fishing waters. In late autumn and throughout the winter, a number of lakes were surveyed to ascertain their liability to oxygen depletion. Many lakes were found to be unable to support fish life unless water levels were raised. Investigations have made it possible to classify those lakes that offer definite possibilities for fishery management. An aeration system was installed at drought-affected Lake Audy in an attempt to prevent winter-kill of pike and their forage species.

Studies were continued on lake trout, splake trout, and yellow walleye in Riding Mountain National Park. Samples of walleye in Clear Lake indicated favourable conditions for that species, with excellent angling prospects for 1962. During September and October, lake trout eggs were collected at Clear Lake and all mature fish captured were tagged for further studies on their development.

Warren Lake, in Cape Breton Highlands National Park, previously treated with chemicals to eradicate eels and white perch, was restocked with speckled trout and rainbow trout. Other lakes in Cape Breton, Prince Edward Island, and Fundy National Parks were stocked with rainbow trout to determine the suitability of various types of habitat.

National Historic Sites Division

The National Historic Sites Division is responsible for the operation, maintenance and interpretation to the public of 25 national historic parks and major sites. It also looks after 580 plaques and monuments erected by the federal government since 1922.

Historic places, including buildings of national historical importance by reason of age or architectural significance, are commemorated by the Minister under the Historic Sites and Monuments Act (1-2 Eliz. II). The Minister is advised by the Historic Sites and Monuments Board of Canada—a group of 14 historians chosen from all the provinces. The Chief of the Division is the Secretary of the Board, and the Division provides the Secretariat.

In the year 1961-62 the historical interpretation program was continued, with important museum development work completed at Batoche,

Saskatchewan, and Grand Pré, Nova Scotia, and planning for new museums at Fort Battleford, Saskatchewan, and at Lower Fort Garry near Winnipeg, Manitoba. A complete interior restoration program was carried out at Woodside National Historic Park, William Lyon Mackenzie King's boyhood home in Kitchener, Ontario, and planning for the refurbishing of the birthplace of Sir Wilfrid Laurier, St. Lin, P.Q. was commenced.

In co-operation with the Engineering Services Division, historical restorations were carried out over extensive areas. In Dawson City, Yukon, reconstruction of the old Palace Grand Theatre, a Gold Rush relic, was brought close to completion and the *S.S. Keno*, one of the old Yukon River sternwheelers, was refurbished on a riverside site to serve as a historic site to the period of river navigation. At Fort Wellington National Historic Park, Prescott, Ontario, structural restoration of the Officer's Quarters was begun.

Intensive work was continued on the Halifax Citadel fortifications and buildings, Prince of Wales Martello Tower, Halifax, and the restoration of the Halifax Garrison Clock was completed. Restoration work was carried out at Fort Charlotte on George Island in Halifax Harbour. No. 2 Powder Magazine at Fort Anne, Annapolis Royal, N.S., was completed, and restoration of the Cabot Tower, Signal Hill National Historic Park, St. John's, Newfoundland, was continued.

Advice and assistance was given by the Division in the setting up and planning of the program for the partial reconstruction of the Fortress of Louisbourg on Cape Breton Island, Nova Scotia.

The major acquisition of the year was Fort Rodd Hill, near Esquimalt, B.C., which was declared a National Historic Park. Planning was undertaken for its development, and preliminary development plans were produced, in co-operation with the Landscape Planning Section, for Fort Amherst National Historic Park in Prince Edward Island, and for an expanded Cartier-Brebeuf Park in Quebec City.

Agreements were entered into with the Province of Ontario for the preservation of the historic battlefield at Stoney Creek; with Saskatchewan for the preservation and development of the Steele's Narrows National Historic Site; with the Town of Fort Qu'Appelle and the Lebret Historical Society for the preservation of the last historical building of Fort Qu'Appelle, Saskatchewan; with British Columbia for the development of an historical park at Fort Steele; with the City of Sorel, P.Q., for the preservation and restoration of the 18th century Governors' Cottage; and with the City of Saint John, N.B., for the development of an historical park on the site of Fort Howe.

Five commemorative plaques were placed and unveiled.

The Historic Sites and Monuments Board held one general meeting, and special meetings were held of the Fur Trade, Old Buildings and Criteria Sub-committees of the Board. The Research Section of the Division provided 50 historical briefs for consideration of the Board, and carried out research

assignments as well in connection with the restoration, furnishing and interpretation programs underway. An historical archaeologist was appointed to the staff of the Division late in 1961, and planning was done for an extensive archaeological program.

In 1961 the National Aviation Museum, set up and officially opened under the National Historic Sites Division, was transferred to the direction of the National Museum of Canada.

Engineering Services Division

The Engineering Services Division was called on for increased efforts to meet the demand for expansion and development in the national parks and national historic parks.

The Architectural Section prepared designs, working drawings, specifications and bills of materials for the construction program in the national parks and national historic parks.

Indicative of the scope of the program was the construction of some 20 different types of buildings worth more than a million and a half dollars. This includes the half-million dollar complex of service buildings at Rogers Pass in Glacier National Park to service the mechanical equipment required to keep the Trans-Canada Highway open throughout the winter. These buildings involved many site and construction problems, since snowfall in the Pass averages some 500 inches per year.

Wardens' residences in this area were specially designed with all living accommodation raised up one floor to be above snow level.

The 1961-62 construction program included such major projects as an administration building, bunkhouse-dining hall and service garage.

The increasing size of buildings under construction has demanded much closer attention to design, for they require the efficiency and economy of the best in modern materials and construction technique.

Following the decision to reconstruct part of the Fortress of Louisbourg, the Architectural Section became associated with planning of the area, and compilation of detailed building requirements. Although consultants were retained for the design of staff housing, administration and compound buildings, the Section's architects spent a great deal of time instructing, checking and administering the design drawings and bills of materials for the ten buildings and ten houses in the first year's program.

Volume of building work necessitated the use of private architectural consultants in order to have contract plans and specifications completed in time for the construction season. This has applied to the Winter Works Program as well as regular seasonal programs.

Field trips were made to assist in selection of building sites, advise on work and make preliminary design studies for new buildings in progress.

Construction drawings for all private buildings in the National Parks are submitted to the Architectural Section to be checked for conformity with the National Building Code and the National Parks Act.

The Landscaping Planning Section produced designs, plans, specifications and bills of materials for campgrounds, trailer parks, picnic areas, highway viewpoints, playgrounds and recreation areas. Complete site development plans were provided for staff residence areas, park office buildings and park entrances.

Intensive studies and production of General Development Plans for the Upper and Lower Lake Louise areas, were carried out by the landscape architects. Continued design studies resulted in improved designs for campground and outdoor furnishings. Examples of design developments and planning improvements being introduced for campgrounds, trailer parks and picnic areas, were provided to other government agencies, and church organizations for their aid and guidance. Field investigations were carried out at several historic sites and preliminary, or final, construction plans were produced.

The Engineering Section provided designs for structures erected in the national parks and national historic parks, and for water, sewerage and electrical distribution systems. It prepared and reviewed specifications for the purchase of equipment, performed duties of Resident Engineers, and gave technical assistance on all problems of an engineering nature encountered by the park superintendents. The Supervising Engineers' offices at Banff, Ottawa and Halifax continued to provide supervision and advice on field projects carried out by day labour and contract.

The aerial survey and mapping program was continued in six western and two eastern parks, and three historic parks. Survey programs were carried out in connection with planning and development. Engineers supervised the following construction projects:

Reconstruction of Upper Hot Springs Pool, repairs to Cave and Basin Pool, construction of warden's residence and duplex staff residence, and completion of the Banff Curling Rink, Banff National Park;

Continued construction of campground and trailer park at Broad Cove, Cape Breton Highlands National Park;

Construction of two staff residences and maintenance garage at Elk Island National Park;

Continued construction of new campground at Point Wolfe, Fundy National Park;

Construction of 15 miles of Maligne Lake Road, Jasper National Park;

Construction of administration building and continued development work on new campground, Kootenay National Park;

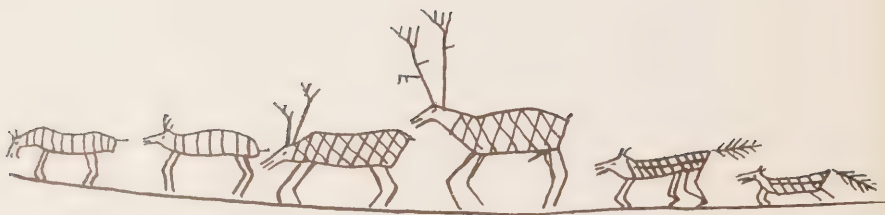
Construction of service garage, workshop, and 12-vehicle storage building at Rogers' Pass and start of development of park entrance gateway and living quarters, Glacier National Park;

Start of installation of water and sewer system in Wasagaming Townsite, Riding Mountain National Park;

Construction of warden's equipment building, Waterton Lakes National Park;

Construction of kitchen, dining hall and living quarters at Boulder Creek, Yoho National Park;

Major restoration and other construction work was carried out at Halifax Citadel, Halifax, N.S.; Signal Hill, Newfoundland; Fort Anne, N.S.; Fort Wellington, Ont.; Lower Fort Garry, Man.; Fortress of Louisbourg, N.S.; Fortification Walls, Que.; Fort Lennox, Que.; Batoche Rectory, Batoche, Sask.; Dawson City, Yukon; Alexander Graham Bell Museum, Baddeck, N.S.; Fort Amherst, P.E.I.





Water Resources Branch

The Water Resources Branch comprises two Divisions, Operations and Hydraulics. Operations is responsible for most basic Branch functions; Hydraulics for special studies required in the solution of waterway problems referred to the Branch. The Branch carries out systematic hydrometric and sediment surveys throughout Canada, studies and analyses problems involving waterways of federal-provincial and international concern, compiles the water power resources inventory of Canada and an inventory of thermal power development, and administers legislation relating to international rivers, water power and water conservation.

The Branch co-operates with public and private agencies in water-power and water-supply problems, in the maintenance of gauging stations and in the performance of hydrometric and sediment surveys and investigations of mutual concern. The Director and senior engineers are members of many federal-provincial and international engineering boards, and boards of control established to deal with waterway problems. The Director is also a member of the Northern Canada Power Commission. As part of a continuing hydrometric survey program, gauging stations of international interest are operated in co-operation with United States Government agencies.

During the year, the Branch, directly or through its representatives on federal-provincial and international boards, took part in several major investigations and study assignments. The river systems where this work was carried out are shown on the map which accompanies this report.

Hydrometric Surveys

Conduct of the systematic hydrometric survey program forms a major part of the work of the Branch. Much of this program is operated in association with some 90 organizations including federal, provincial, municipal and private agencies. Field operations are carried out by six district offices and 18 sub-offices distributed throughout Canada from Newfoundland to Yukon Territory. During the year, 1,553 gauging stations were operated wholly or in part by the Branch. Field operations included 8,915 stream discharge measurements and 2,365 additional inspections of gauging stations.

Water Resources Papers containing records compiled from hydrometric survey operations are published from time to time. Each paper covers one

of the four main drainages of Canada. This year the Branch published Water Resources Papers for the Pacific Drainage for water years 1956-57 and 1957-58; Arctic and Western Hudson Bay Drainage 1957-58; Atlantic Drainage 1958-59 and 1959-60.

The Current Meter Rating and Experimental Station at Calgary combined the repair and calibration of current meters and related equipment with investigation and development of new types of instruments. Its calibration services were also available to public and private agencies.

Based on streamflow records from 24 typical Canadian rivers, monthly statements were released to the public and to the United States Geological Survey which publishes a monthly summary of streamflow covering both Canada and the United States.

During the period covered by this report, mean monthly flows were slightly above normal in British Columbia, below in the Prairie Provinces and Quebec, near normal in Ontario and the Maritimes, and well below in Newfoundland.

On several rivers subject to dangerous floods, frequent observations of stage were obtained and a flood warning service maintained during periods of high flow. Water levels were obtained at 26 key locations in the Columbia and Fraser River basins in British Columbia, at some 20 locations in the Saskatchewan River basin in Saskatchewan, and, to a lesser degree, on some other rivers. From this information, together with a study of river conditions and current meteorological data, day-by-day estimates of probable stages in the lower reaches of flood-prone rivers were made available to interested agencies.

The annual program of snow surveys was carried out in areas where this information is required for preparation of estimates of spring runoff. A program of sediment survey was begun on the Red, Assiniboine, and North and South Saskatchewan Rivers in Saskatchewan and Manitoba. This is being developed along similar lines to the hydrometric survey and will be expanded next year by the addition of new stations, and the establishment of a sediment analysis laboratory at Saskatoon.

Waterway Problems and Water Power Administration

Staff members served on 22 international and five federal-provincial boards and committees set up to study problems relating to control of boundary and other waters. Representatives served on, or aided the work of, seven national committees concerned with water resource development and related fields. District offices assisted other federal agencies in engineering studies on specific water problems.

Technical advice was provided to the Department of External Affairs and the Canadian Section of the International Joint Commission in their studies of international waterways problems on a number of river basins such as the Saint John, St. Croix, St. Lawrence, Red, Souris, St. Mary, Milk, and Columbia basins, and Lake of the Woods.

WATER RESOURCES BRANCH

LEGEND

RIVER SYSTEMS INVOLVED IN MAJOR INVESTIGATION AND STUDY ASSIGNMENTS DURING FISCAL YEAR 1961-1962.

INTERNATIONAL

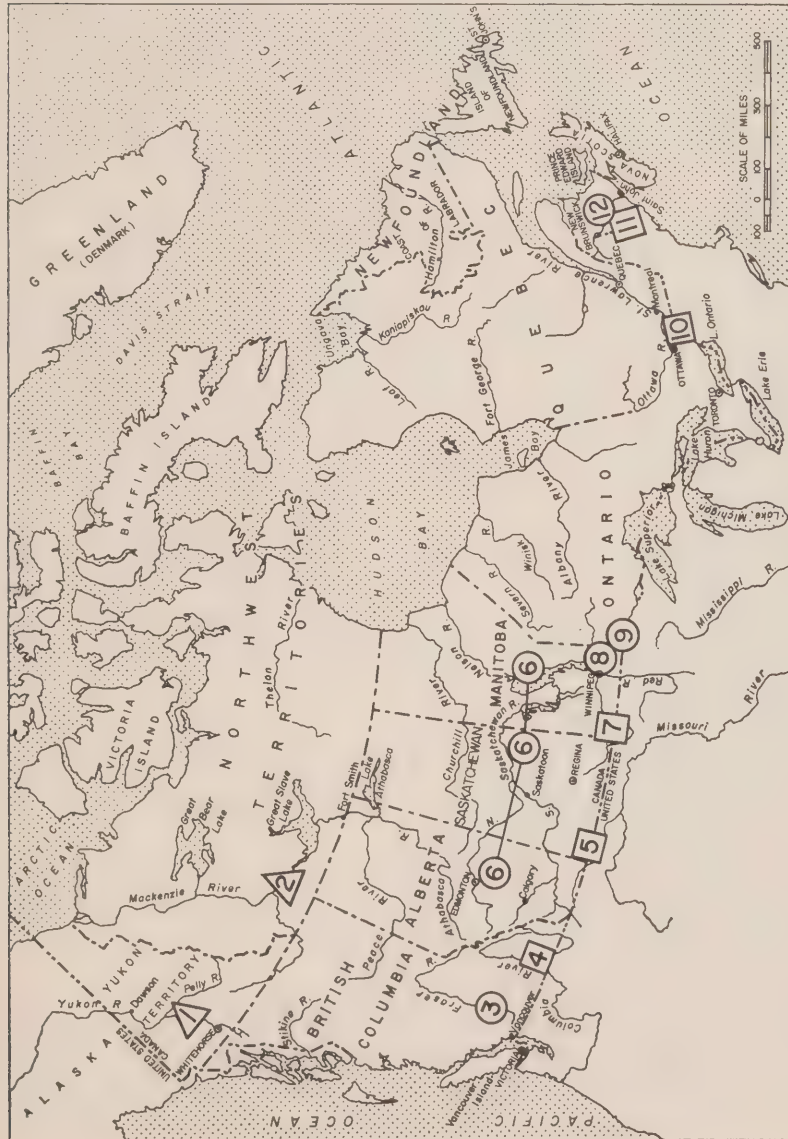
4. COLUMBIA
5. ST. MARY-MILK
7. SOURIS-RED
10. GREAT LAKES - ST. LAWRENCE
11. ST. CROIX

FEDERAL-PROVINCIAL

3. FRASER
6. NELSON-SASKATCHEWAN
8. GREATER WINNIPEG FLOODWAY
9. LAKE OF THE WOODS-WINNIPEG
12. SAINT JOHN

FEDERAL

1. YUKON
2. MACKENZIE



CANADA
MAJOR INVESTIGATIONS AND STUDIES - 1961-1962

The Branch is represented on the International St. Lawrence River Board of Control and continued to play a leading part in the regulation of outflow from Lake Ontario and in studies to determine improved methods of regulation for most effective operation of the St. Lawrence Power and Seaway Project. A revised plan of regulation went into effect in January 1962.

To meet the expressed needs of Canadian agencies concerned in regulation procedure, the Branch opened a permanent study office at Cornwall, Ontario, responsible to the Canadian Section of the Board of Control.

The Branch is represented on both the International Niagara Committee and the International Niagara Board of Control. The Committee was created by and is responsible to the Governments of Canada and the United States. It determines the flow of the Niagara River, the amount of water diverted for power production or other purposes and ensures that the requirements of the Niagara Treaty of 1950 are met. The International Niagara Board of Control was established by the International Joint Commission and is responsible for ensuring that the remedial works are maintained and operated without adverse effects on the levels of the Niagara River and Lake Erie. The increasing diversion by the United States of its share of the water available for power purposes has necessitated the extension of the remedial works and the building of training walls parallel to the Canadian shore. Following approval from the International Joint Commission the required construction was initiated under the supervision of the Board of Control.

Other Branch activities in the St. Lawrence-Great Lakes Drainage Basin included membership on the International Lake Superior Board of Control and studies of the Ottawa River Basin. In 1961, the Governments of Canada, Ontario and Quebec agreed to the establishment of the Ottawa River Engineering Board to study storage and regulation possibilities of the basin.

Pending preparation of a new Reference by the Governments of Canada and the United States for joint development of the Pembina River Basin in Manitoba and North Dakota, the International Souris-Red Rivers Engineering Board was authorized to continue studies and the collection of data relating to water resources of the basin. The Board also continued work on the Roseau and Souris Rivers.

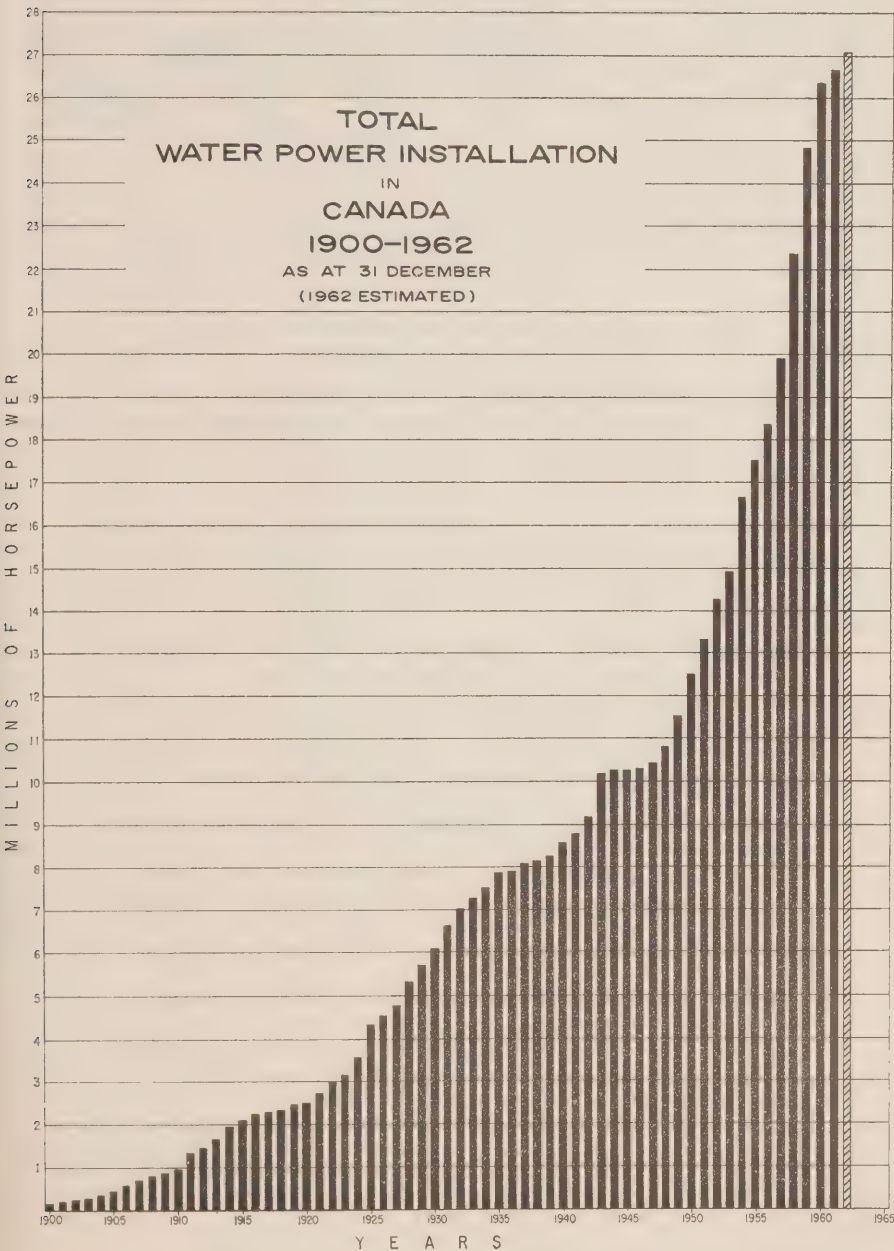
Columbia River studies were continued, particularly with respect to those projects covered by the Treaty of January 1961 signed by Canada and the United States. This Treaty was ratified by the United States but implementation awaits similar action by Canada.

The Branch continued to take part in studies made under direction of the Fraser River Board to determine the possibilities of Fraser River basin development, with special reference to flood control and hydro-electric power generation.

Through its membership on the Prairie Provinces Water Board, the Branch plays an important part in studies designed to bring about integrated development of the water resources of the Saskatchewan-Nelson River Basin. The need for integrated development of the water resources of the Prairie Provinces is indicated by the increasing competition for the use of water for

domestic, municipal, irrigation, industrial, power generation, and other purposes.

The Greater Winnipeg Floodway Advisory Board, on which the Branch is represented, makes recommendations on all matters relating to construction of a floodway to protect the Winnipeg metropolitan area against recurrent floods. The Board worked with the various agencies involved in planning



the floodway and ancillary works, and with railroad, highway, and other agencies whose facilities will be affected by the floodway channel excavation.

In the Yukon and Northwest Territories, hydro-electric power surveys were continued on rivers that included the Yukon, Liard and South Nahanni.

During the year, the Secretariat of the Advisory Committee on Water Use Policy became part of the Water Resources Branch.

The Branch took part in the "Resources for Tomorrow" Conference in Montreal in October 1961 and contributed two study papers.

An important function is the administration of the Dominion Water Power Regulations relating to water power developments on federal lands. Water and land rentals totalling \$49,726.63 were collected for the nine developments under federal license. Some two-thirds of this total was collected on behalf of the Indian Affairs Branch of the Department of Citizenship and Immigration.

The Branch performed work relating to administration of the International River Improvements Act and Regulations and the Canada Water Conservation Assistance Act. Annual reports including details of these activities were tabled in the House of Commons.

Based on the hydrometric surveys, field investigations and other data, the current estimate of the water power resources of Canada is 70,451,000 hp. at ordinary six-months flow. During 1961, a net increase in capacity of 294,650 hp., brought the total installed turbine capacity of all water power developments in Canada to 26,688,094 hp. The year 1962 will see the addition of some 416,000 hp. of new hydro capacity. Hydro-electric projects either under construction or in the planning stage will add more than 8,000,000 hp. in subsequent years.

The Draughting Section was engaged in preparing maps, plans, charts and diagrams to illustrate special features of reports and other technical papers. The Section also carried out a considerable amount of work in the preparation of illustrative material for use by the Deputy Minister's office and by other Branches and Divisions.

¹ In addition to the Water Resources Papers, two symposia publications and four regular annual bulletins were published.

¹ See Appendix E.



National Museum of Canada



Natural History Branch

This Branch is the national museum of biology and geology. Besides displaying exhibits of plants, insects, fishes, amphibians, reptiles, birds, mammals, minerals, and fossils, the museum maintains research staff and reference collections in botany, all branches of zoology except entomology, and vertebrate palaeontology.

A new exhibition hall for mammal habitat groups, and space to revise the bird, mineral and fossil exhibits, will be provided by renovation of the Victoria Museum building begun this year. The first major exhibit in this program, *Prairie Waterfowl In Spring*, was opened by the Prime Minister in November. The second, *Snow Geese At Eskimo Point*, was completed shortly after the end of the fiscal year and opened by the Minister of Northern Affairs and National Resources.

The Branch sponsored a seminar on the origin of birds and supported a series of workshop meetings on biology and geology by the Ottawa Field Naturalists' Club. By arrangement with the Department of Mines and Technical Surveys, a national mineral collection was established. The exhibition series is to be held by the National Museum.

The Director represented the National Museum at the annual meetings of the Association of Science Museum Directors, American Association of Museums, l'Association canadienne-française pour l'Avancement des Sciences, the UNESCO Associate Committee on Natural Sciences and the Conference of Directors of Systematic Collections. He was elected President of the Canadian Museums Association and Vice-President of the Association of Science Museum Directors. During the field season he visited a fossil-collecting expedition in Prince Edward Island.

Botany

The Botany Section constitutes the National Herbarium of Canada. This year field research included the mosses of Canada, and plant studies in the Mackenzie region, the Rocky Mountains, eastern Canada, and the boreal forest zone. Reports on vascular plants and mosses were completed for publication.

During the year a total of 10,685 mounted and identified specimens were added to the collection. Of these, 1,719 were collected by staff during field work, 3,291 were given in return for identification, 5,436 were received by exchange and 2,241 were donated. With the addition of 4,301 new specimens, the collection of identified vascular plants now totals 270,029. Corresponding figures for the cryptogams are 6,384 added; total number of cryptogams 102,430. The number of type specimens was increased by 33 to a total of 1,852.

During the year 83 visiting botanists used the resources of the Herbarium. Loans of specimens totaled 2,739 and 905 duplicate specimens were distributed to other herbaria. Many specimens were identified for other botanists and inquiries dealt with by correspondence. More effective use of the collection is now possible through improved laboratory and storage space.

Staff botanists represented the National Museum at meetings of the Royal Society of Canada, l'Association canadienne-française pour l'Avancement des Sciences, Arctic Institute of North America and American Bryological Society.

Zoology

Field investigations were concerned with the marine invertebrates and fishes of northern British Columbia and the Gulf of Alaska, molluscs of northwestern Ontario and adjacent Manitoba, amphibians and reptiles of the Prairie Provinces, birds of the north shore of the Gulf of St. Lawrence, and mammals of the Queen Charlotte Islands and Yukon Territory. University zoologists, under contract, studied fresh-water invertebrates in Alberta, Ontario and Quebec, and fishes of the Bay of Fundy.

Popular interest in the animal life of Canada, especially birds, requires that much of the zoologists' time be spent in answering inquiries, personally and by letters. Specimens identified for zoologists and naturalists numbered 96 and close to 100 visitors were received on zoological business. The Zoology Section loaned 119 mammal specimens, 326 birds, a reptile and an amphibian to school classes. Scientific supervision was given in the preparation of the large bird habitat groups, the specimens being mounted in the Zoology laboratory.

Specimens added to the museum collections and totals at the close of the year numbered: molluscs and brachiopods, 55,000 additions, total of 281,700; arthropods and other invertebrates, 69,700 additions, total of 269,300; fishes, 16,613 additions, total of 33,998; amphibians and reptiles, 5,061 additions, total of 27,633; birds, 1,306 additions, total of 49,212; mammals, 2,535 additions, total of 30,818. Most noteworthy single accession was the Conde collection of molluscs, numbering 4,800 lots of specimens.

Members of the Zoology Section represented the National Museum at the following meetings: American Malacological Union, 25th Federal-Provincial Wildlife Conference, American Society of Ichthyology and Herpetology, Tenth Pacific Science Congress, American Ornithologists'

Union, Canadian Amphibian and Reptile Conservation Society, Canadian Museums Association, Canadian Society of Zoologists, Canadian Society of Fisheries and Wildlife Biologists, Symposium on the Evolution and Phylogeny of Crustacea.

Palaeontology

The search for vertebrate fossil bones in the red beds of Prince Edward Island was continued and a small but interesting collection obtained. Two major research projects were continued this year. One was a study of the Cretaceous vertebrates of southern Alberta, and the other was concerned with the fossil vertebrates of Prince Edward Island. As a result of the latter, it was possible to assign a more definite geological age to the rocks of that province.

In the laboratory work progressed on dinosaur skeletons being prepared for research purposes or for display in the new dinosaur hall. Facilities were provided for the preparation of a duck-billed dinosaur skeleton, later set up as a long-term loan at the Drumheller and District Museum in Alberta.

A successful search for fossil fishes in Nova Scotia was conducted by a university worker under contract. Another contract permitted the National Museum to take part in a joint expedition with the American Museum of Natural History to relocate a rich deposit of fossil fishes in the Rocky Mountains.

The National Museum was represented at the annual meeting of the Society of Vertebrate Palaeontology. During the year 19 specimens of fossil vertebrates were identified, many for the Geological Survey of Canada. Four loans of vertebrate fossils were made. Enquiries dealing with palaeontology were 37 and visitors using the collection for their studies numbered 6. Additions to the catalogued collection were 47, bringing the total to 4,909.

Human History Branch

This is the Museum of Man, comprising the national collection in the anthropological sciences: physical anthropology, aboriginal archaeology, linguistics, ethnology, folklore and folk music. Canadian history is being added.

A new exhibition hall, in which the life of the Canadian Eskimo will be illustrated, was begun in the renovated Victoria Memorial Museum Building. More space and better storage facilities have been provided for archaeology and ethnology, and new laboratories for the study of folk music.

A seminar on Iroquoian ethnology was arranged for local anthropologists and others interested in the subject. The Acting Director represented the National Museum at the Miramichi Folksong Festival and served as Chairman on the Board of the War Museum. During the field season, he visited an archaeological expedition at Michipicoten, Ontario, and an ethnological field party at Perth, New Brunswick.

Canada was invited by UNESCO to participate in saving the archaeological treasures of Nubia and the National Museum recommended that a Canadian expedition be sent to excavate pre-dynastic sites. This proposal was tentatively adopted and, in collaboration with the University of Toronto, an archaeologist travelled to Egypt to explore the possibility of forming a Canadian expedition. Sites were available, he reported, where a Canadian expedition could make a valuable contribution to North African prehistory.

Archaeology

Four archaeological expeditions by museum scientists went into the field this year. Important results were obtained from further investigation of stratified sites in southwestern Yukon Territory where evidence of early occupation had been found. In Ontario work was concentrated mainly along the north shores of Lake Superior and Lake Huron. In Quebec work was done in the Eastern Townships and the Saguenay region in association with the University of Sherbrooke. In New Brunswick survey work was continued.

Arctic archaeology concentrated on excavations on Bathurst and Somerset Islands. Studies on the Fraser Canyon sites north of Yale, B.C., and on burial mounds near Lillooet, proceeded on a contract basis with workers from the University of British Columbia.

Principal archaeological research projects in progress were the study of early occupation levels in Yukon Territory, pre-Dorset artifacts from the eastern Arctic, archaeology of the Donaldson site of southwestern Ontario and material from shell mounds and sites on Vancouver Island.

The physical anthropologist visited Canadian museums and universities from Victoria to Toronto in a survey of Indian and Eskimo skeletal material with particular reference to skull structure. Skeletal remains from Ontario sites were also investigated.

The Senior Archaeologist was on leave of absence for six months to direct archaeological research in east-central Mexico, the results of work done here having some bearing on the origin of agriculture among the native peoples of Canada. The Acting Senior Archaeologist made a survey of historical archaeologists, in parts of Europe, who might be available for the Historic Sites Division of the National Parks Branch.

Staff members represented the National Museum at meetings of the Society for American Anthropology, Northeast Anthropological Conference, Conference on Anthropology and Africa Today, American Association of Physical Anthropologists, Historical Society of Argenteuil County, Central States Anthropological Association, American Anthropological Association and Iroquois Conference.

Additions of catalogued specimens to the archaeology collection were 17,594, bringing the total to 148,845. The physical anthropology collection was increased by six to a total of 1,517 specimens.

Ethnology

The study of the Algonkian Indians is the Museum's major project in ethnology and linguistics. Research work continued in Labrador, Gaspé, the Lake St. John area, the Gatineau Valley, the James Bay area and Manitoba. The linguistics of the Micmac language of Nova Scotia, Prince Edward Island and New Brunswick were studied: the linguistics of the Caughnawaga Iroquois were under investigation by contract. One field party studied the Malecite Indians of Tobique, New Brunswick.

The long-term program on the folklore of the Atlantic Provinces and Eastern Quebec, including studies on the Acadians of the Magdalen Islands and St. Mary's Bay, Nova Scotia, is nearing completion. Plans are to extend the work into Ontario and farther west to include the folk culture of the less populous ethnic groups. A special ethno-historical study was supported in Newfoundland. A contract was given for social studies in French Canada and a second for research on the materials of agriculture in old Quebec.

Folk songs in English and Gaelic from Nova Scotia, and folk songs of southern Newfoundland, were added to the Museum collection. Two rooms for folk-song recordings have been completed and old cylinder and disc recordings transcribed to magnetic tape. About 250 requests for material from the folk song collection were met and a basis laid for an exchange of folklore material with le Musée des Arts et Traditions populaires in Paris.

Members of the Ethnology Section staff represented the National Museum at meetings of the Northeastern Anthropological Conference, Canadian Political Science Association (Anthropology and Sociology Chapter), Linguistic Society of America and the American Anthropological Association. Staff members aided in planning and running the International Folk Music Congress in Quebec City. Assistance was also given in the preparation of an anthropological exhibit at the University of Montreal.

Acquisition of 311 specimens to the ethnology collection brought the catalogued collection to 24,695. In folklore, 1,384 tape recordings were added to the present collection which now numbers 19,952 items. A total of 26 loans were made, the largest being to the Heard Museum of Phoenix, Arizona, and the Seattle World's Fair. Ethnological and linguistic inquiries answered total 96: objects identified or appraised, 25.

History

A complete set of early 19th century surgical instruments from Upper Canada, and a fine representative series of Quebec silver, were outstanding additions to the collection that will form the basis of the Canadian Historical Museum.

Some 317 objects were acquired this year, mainly by purchase, bringing the catalogued collection to 1,692 pieces. The work of expanding, cataloguing and storing the collection was carried out by the Acting Director and

members of the Ethnology Section. The collection is particularly rich in things representing the home life, crafts and industries, of 18th and early 19th century Canada.

Certain historical items have been transferred from the Public Archives to the National Museum, including relics of Sir John A. Macdonald. The Museum is associated with the Department of Agriculture in the project to organize and display the fine collection of pioneer agricultural equipment stored at the Central Experimental Farm in Ottawa.

Canadian War Museum

The Canadian War Museum is responsible for collecting, preserving and putting on display materials used in the wars in which Canadians have fought.

This year the museum acquired 316 specimens. One of the main sources of supply was the Public Archives. From the Archives, a plaster model of the monument erected in France to commemorate the battle of Vimy Ridge on April 9, 1917, is of special interest. A Gatling gun, representative of the three guns used during the North-West Rebellion of 1885, was another fine acquisition. The gun is in firing condition complete with gun carriage and limber.

Two special exhibitions were prepared during the year. One showed the principal light and medium machine guns used by the major armies of the world: the second was an exhibition of swords used by British and Canadian armies in Canada from 1760 onwards. Each monarch during this period is represented by a sword bearing the Royal Cypher on the Guard.

A total of 157 loans were made to other museums and educational institutions. Conducted tours were provided for 405 groups, with a total of 14,793 individuals, mainly from schools, colleges and the Armed Forces. Total attendance for the year was 153,662.

National Aviation Museum

The National Aviation Museum is concerned with the history of aviation in Canada, first, but not exclusively, civil aviation. In June its administration was taken over by the National Museum of Canada. The Aviation Museum, in the International Air Terminal Building at Uplands Airport, forms the nucleus of a future Canadian Museum of Science and Industry.

The year's major acquisition was a Canadian Curtiss JN-4, in almost perfect condition, purchased in the United States. Next to the Silver Dart, this is historically the most important Canadian aircraft. Other full size aircraft obtained were a Harvard II and the airframe of a De Havilland Tiger Moth. The first seven of a series of scale models made for the museum were received and five more presented by aircraft firms. A number of items associated with the Avro CF-105 were received as gifts. The Institute of Aerospace Sciences in New York contributed over 500 valuable books on the

history of aviation. New exhibits installed were two rotary engines, the cockpit of a Cessna Crane, and a sectioned Orenda engine.

The Curator visited Sault Ste Marie and Winnipeg in search of information on Canadian aviation history. Visits to the USAF Museum in Washington, D.C. provided valuable information on the preparation of exhibits.

A total of 130,899 people visited the National Aviation Museum.

Common Services

Both Branches of the National Museum are served by the Education, Museology, Library, Photographic and Mechanical Sections.

The interpretative program is carried out by the Museology Section, responsible for exhibits, and the Education Section which provides information through lectures, film showings, guided tours, and loan or sale of publications, photographs and films. Both are the direct responsibility of the Assistant Director.

The Wednesday evening lecture program consisted of 18 regular lectures, with 10 special presentations in English and four in French. A total of 10,117 people attended the English series: 681, the French. Guided tours were organized for 172 groups of whom 20 were French speaking: a total of 5,267 people participated in this service. Twenty-six groups made use of the lecture hall.

The Saturday morning children's program brought out full houses (total attendance 20,897) to see 20 presentations of films or talks. Art classes for children gave instruction in drawing, painting and modelling, with the primary purpose of increasing interest in Museum displays.

The classes attracted 80 to 125 children each week for 21 weeks. Grade 7 classes of Ottawa Public Schools continued to use Museum resources for lessons in Indians or natural history.

The lecture hall acquired a new cinemascope screen, a portable 16 mm. sound motion picture projector and a projector for opaque pictures and objects. Additions were made to the film and slide libraries and publications and photographs were on sale.

During the 1961-62 fiscal year, the Museum received 190,839 visitors.

The largest project undertaken by the Museology Section was the production of three bird habitat groups, *Prairie Waterfowl in Spring*, *Snow Geese at Eskimo Point*, (almost complete by the end of the fiscal year) and *Sea birds On Bonaventure Island*. Backgrounds for all three were painted by the well-known Canadian artist, Hugh Monahan.

The Eskimo Hall was begun and plans made for a series of dioramas depicting an Iroquois village, and the work of the Archaeology Section.

Temporary exhibits included a display on Indonesia related to the Gamelan concerts in the auditorium. Displays were also set up, with the Geological Survey, for the annual convention of the Canadian Institute of Mining and Metallurgy in Ottawa.

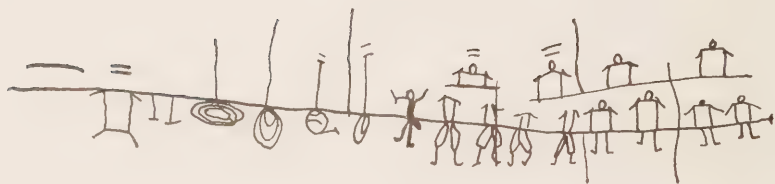
The Mechanical Section carries out all construction work in the Museum except that done by the Department of Public Works. Construction was completed on the bird habitat groups, background shells for seven new mammal groups were assembled, and work begun on the walls, and cases for the Eskimo Hall.

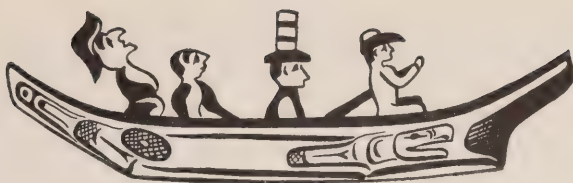
The Superintendent was a delegate to the annual meeting of the Canadian Museums Association. His attention was also given to plans for a new building to house the Canadian Historical Museum.

An estimated 38,959 volumes are in the library with some 2,000 items still to be catalogued. Acquisitions totalled 959 books, the most important of which was a set of Chenu's *Illustrations conchologiques*. Other additions were made on indefinite loan from the National Library. The library of the late Dr. R. M. Anderson was placed in the Museum Library, making an important addition to the material on zoology and the Arctic. The Librarian represented the Museum at the Special Libraries Association Conference and at a Mid-Pacific Conference of Libraries in Honolulu.

The Photography Section carried out all requirements for printing, enlarging and other photographic services. Specimens were photographed for illustration and records; field photographs developed and printed, enlargements made. This year 8,371 individual jobs were completed.

The negative collection of the Geological Survey of Canada is still in the care of the Museum.





Canadian Government Travel Bureau

Value of Canada's Tourist Industry

In 1961, preliminary estimates by the Dominion Bureau of Statistics show that Canada's tourist income achieved a record advance of \$53 million, giving the tourist industry increased stature as a leading export commodity. United States residents spent \$429 million in Canada, an increase of \$54 million over 1960. Canadians in 1961 spent \$453 million in the United States, \$9 million less than in the previous year.

Total tourist income rose to a record \$473 million, 12 per cent above the previous record of \$420 million earned in 1960. Canada's deficit on travel account fell to \$160 million, a notable reduction of \$47 million from the previous year.

More Canadians than ever visited overseas countries and spent a record \$180 million on their trips, compared to \$165 million in 1960. Spending by overseas visitors in Canada, however, dropped slightly to \$44 million compared to \$45 million the year before. This resulted in a rise in the deficit on overseas travel account to \$136 million, a \$16 million increase over 1960.

Travellers entering Canada rose to a record 30.5 million; this was matched by a new high of 29.3 million Canadians who entered the United States or went abroad.

Role of the Canadian Government Travel Bureau

For Canada tourism is big business; one that in this jet age is rapidly expanding. The Canadian Government Travel Bureau continued to play a key role in bringing more tourists to Canada, encouraging greater co-ordination of Canada's efforts in the world travel market, and taking an increasingly active part in national and international travel organizations.

The Travel Bureau is widely known among government travel agencies for its system of statistical checks on advertising results and for its market research. Experts from other countries often visit Ottawa to study its operation, which is regarded as a model of its kind. It handles more inquiries in a year than any similar bureau in the world.

The Small Business Loans Act of 1960, and the July 1961 amendment to the Industrial Development Bank Act, broadening the scope to include

tourist enterprises, have made it possible for tourist operators in Canada to obtain loans for a wide variety of purposes.

A study of the potential for Canada of the British and European travel market was made by the Assistant Director while attending two major International Travel Conferences in France and Germany in the fall of 1961. Conferences were held in Canada and Europe with Canadian and foreign government representatives and travel officials to explore the potential of the European travel market and prepare plans for an overseas office and promotion program.

Travel Bureau Activities in the United States Market

In undertaking promotion in Canada's chief travel market—the United States—the major efforts of the Bureau were concentrated in the fields of advertising and publicity.

Advertisements were placed in some 40 magazines and 92 newspapers, with an aggregate circulation of about 141 million. For the 1961-62 fiscal year the advertising appropriation was over \$1.7 million. For the first time, an extensive and successful radio campaign was inaugurated in 1961, over 19 north-eastern stations.

In 1961, the Bureau continued to use the Trans-Canada Highway as a main theme of its advertising approach as the Highway had come close enough to completion to be featured as a major attraction.

The special Atlantic Provinces Campaign, begun in 1957, has been credited with a yearly increase of 10 to 20 per cent in tourist industry into this area. Tourist traffic into the Atlantic Provinces increased in 1961 by 35 per cent.

In July 1961 a new Travel Bureau field office was opened by the Minister in San Francisco to supplement existing offices in New York City and Chicago. During the year these three offices handled more than 115,000 inquiries, an increase of almost 22 per cent over the 1960 total of 95,000.

The function of these field offices is to supply Canadian travel information in their immediate areas, maintain liaison with individuals and agencies engaged in travel service and promotion in the United States, and promote travel to Canada through arranging free publicity in U.S. media.

Other Media of Advertising, Promotion and Publicity

One of the steps taken to intensify and extend the Travel Bureau's advertising efforts in the United States in 1960 was the rental of a spectacular electronic sign in Times Square. The sign, 34 feet high and 32 feet long, was rented again in 1961 and animated by Norman McLaren's Brussels Film Festival award-winning presentation. The only sign of its kind in the world, it is seen by an estimated one million people each day.

Canadian travel and wildlife films were distributed in the United States in co-operation with the National Film Board of Canada, the provincial travel bureaux and major Canadian transportation companies. The Canadian

Travel Film Libraries in the United States were enlarged, opening new avenues of distribution. The bureau's contribution of 1,271 prints in 1961-62 represented 70 per cent of the total new supply.

More than 600 outlets served as distribution points throughout the United States for the 6,671 prints of the 177 titles of Canadian travel films available. New outlets were established and existing outlets reviewed to bring them more in line with distribution potential in particular areas. A total of 1,006 old prints were withdrawn and twenty older titles were removed from distribution. Replacing them were 23 new productions representing a wide cross-section of the country. A 21 per cent increase in the supply of new prints gave added impetus to this program.

Direct screenings of travel films in the U.S.A. rose to a new high of 124,810, an increase of 12.7 per cent over the previous year. Audiences totalled nearly 7 million.

In conjunction with its Travel and Wildlife Film Program, the Bureau provided prints free for television broadcasting through a library maintained by the National Film Board in New York City. As of December 1961, 696 prints of 72 titles were available from this television library. Recorded telecasts for the year totalled 2,079.

A highly successful venture into television film broadcasting has been the two-to-three minute Canadian short film items or "Televisits", produced for the Bureau by the National Film Board, with co-operation from provincial travel Bureaux. There have now been an estimated 9,000 telecasts of the 30 televisit subjects. In 1962, a further series of ten televisit titles was commissioned.

Public Relations

The Bureau conducts most of its public relations through its Publicity Division in Ottawa and its New York, Chicago and San Francisco offices. The Director also maintains direct contact with major publications in the United States.

In 1960, to meet the competition from other nations, many of which spend large amounts to influence editors, writers and travel officials who can greatly affect the flow of tourists, the Bureau began a new program to extend business courtesies and hospitality to these officials on the same scale as other countries and certain Canadian provinces.

During 1961 the Bureau increased activities in this field and invited to Canada the travel editors of a number of major United States newspapers and magazines. They came to Canada individually and spent up to eight days visiting the Maritime Provinces, Ontario, Quebec, Manitoba Saskatchewan, Alberta and the Yukon Territory. During the winter, leading travel writers visited the Quebec Winter Carnival, the Laurentians and Ottawa. The Bureau also commissioned lecturers to show films and deliver talks on Canada in major centres of the United States.

Publicity activities in 1961 were concentrated on providing feature

stories on request, supplying special articles to selected newspapers and assisting editors and writers in the preparation of articles and newsfeatures on Canadian travel. Four feature picture stories were prepared for circulation through "Feature" magazine which offered them to some 20,000 publications: *Canadian Honeymoon*, *Adventure Along the Trans-Canada Highway*, *Autumn Vacations in Canada*, and *Canada—White Wonderland*. A total of 513 requests were filled with these stories. A total of 100 articles were prepared and 1521 placements made among 156 United States daily newspapers.

More than 11,500 black and white photographs were distributed to newspapers, magazines and other publicity outlets. Colour transparencies sent out on loan totalled 2,242. The photographic library added 1,802 black and white photos and 2,618 colour transparencies as a result of an extensive photographic program.

Overseas Activities

In co-operation with the Departments of External Affairs, Citizenship and Immigration and Trade & Commerce, and main transportation companies, the Bureau more than doubled distribution of publications to overseas countries. A total of 221,266 pieces of literature and 12,499 posters were mailed out, more than double the corresponding figures for 1960.

Membership in Foreign and National Travel Associations

The Bureau is affiliated with three international travel organizations—the *International Union of Official Travel Organizations*, the *American Society of Travel Agents*, the *National Association of Travel Organizations*, and one national association—the *Canadian Tourist Association*.

IUOTO has a membership of 84 nations. It is the most respected international travel body in the world.

ASTA presents a unique opportunity to promote Canada's travel industry through contact with some 3000 travel agents, mostly in the United States.

NATO is composed of leading travel officials in the United States and Canada.

The Bureau gives financial support to the CTA and supports its campaign "Know Canada Better", and its efforts to promote interprovincial travel.

Travel Information Services

During the year the Bureau serviced 899,768 inquiries, of which 748,000 were serviced in Ottawa, with the balance through its offices and the Canadian Consulates in the United States; some 245,000 of these required special attention by the Travel Counselling Section. Greater emphasis was placed on more personalized service.

A total of 47 booklets, folders, posters and maps was published. New and more colourful editions were issued of *Alaska Highway—Road to Yukon Adventure*, *Calendar of Events in Canada* (published bi-monthly), *Canadian Havens from Hay Fever*, *Where to Fish in Canada*, *Steamship Companies*

Operating to and Within Canada, Canada Border Crossing Information, Canadian Package Tours and Canoe Trips in Canada. The Bureau's main promotional brochure *Invitation to Canada* was, for the first time, printed on enamel-coated stock for the inside pages, adding brilliance to the colour photographs.

Three new four-colour Canada posters were produced, one with a Royal Canadian Mounted Police theme and the other two depicting winter and autumn scenes. With the existing *Summer Fun in Canada, See Canada This Year* and a large fishing poster, the Bureau has six colour posters available for travel promotion purposes.

Currency Exchange and Customs Exemption Program

In the United States the Bureau distributes over a million copies annually of its *Border Crossing Information* folder, which includes detailed information on the exchange situation, customs exemption and other helpful guidance. More than 190,000 currency leaflets and nearly 15,200 posters urging the use of Canadian currency in Canada were displayed to United States travelers at customs ports of entry, hotels, motels, restaurants and department stores. A poster outlining customs exemption on purchases by United States residents was also displayed widely in these same areas.

Distribution

Over 6,000,000 copies of Bureau publications and posters, in addition to large quantities supplied by provincial and local tourist offices and transportation companies, were distributed—more than 800 tons of material.

Research and Statistics

A total of 748,000 responses in the form of coupons from advertisements and letters of inquiry were processed to provide up-to-the-minute tabulations of media responses. This procedure is of increasing value in planning and executing advertising campaigns.

Tourist motivation studies, instituted in 1959, were broadened. Annually, since that date, 140,000 respondents to the Bureau's advertising were mailed a questionnaire to determine their travel habits in Canada.

Some 23,000 responses were received in each of the past three years and given intensive analysis.





Administration Services

Economic Division

The Economic Division carries out economic research and provides advice on economic questions relating to the Department's role in administering and developing northern Canada and in the management of resources generally.

The Division's inquiries and advice range across the entire area of departmental activity. As in past years, economic considerations relating to transportation, mining and energy held primary positions in the Division's work. Also, Economic studies were done on territorial revenues and expenditures, the processing and marketing of resources, on water power, forest operations, tourism and other renewable resource development.

Among its specific projects, the Division did analytical work on the territorial development roads program, the Great Slave Lake Railway, and the disposition of the Canol pipelines. It also made economic evaluations of various northern Canada mining undertakings.

The Division provided consultation on matters of both policy and substance. Members of its staff represented the Department on a number of inter-departmental and special committees which met during the year.

Editorial and Information Division

The Division provides a centralized service for the Department and Branches and the Secretariat for the departmental Publications Committee. Its assignments range from editing scientific books to helping introduce Eskimo-caught Arctic char to southern Canada.

Editorial

Editors handle manuscripts, English and French, from typescript to publication. Many are contributions from Canadian experience in natural and human history that, in book form, are exchanged with universities and libraries around the world. There is great diversity in manuscripts. They come from scientists working in many disciplines and handling them requires special editing skills. Year by year Canadians are showing a deeper interest in learning more about their many-sided heritage—animal, bird, fish and plant life, the

north, the early history of man on this continent, the rich fusing of cultures, old and new, from English, French, Indian and Eskimo roots. This is a growing library of knowledge to which the department is adding its share. Format—how a manuscript looks when it is published—is second only to content. To reach the ever-widening audience for this type of knowledge, work must be attractively presented. Better presentation is an end that the department is constantly striving for in publications that appear under its imprint. This year the total of publications rose to 258; up 56 over 1960.

Information

Information officers work with national and regional news media—press, television, radio, etc.—and provide whatever type of presentation is required. News liaison duties included services for meetings of the Council of the Northwest Territories in Ottawa and the north, the Eskimo Affairs Committee, and a series of summer ceremonies in the National Parks. Special assignments included preparation of a sound track commentary and press material for Canada's Arctic town-of-the-future at the Century 21 Exhibition in Seattle. A coast-to-coast marketing program to introduce Sweetgrass buffalo meat from the north, worked out with the Industrial Division, in co-operation with national news media, brought such public response that the 250,000 pound shipment was sold in four days. A member of the Information staff acted as escorting officer to a party of French industrialists and officials from the Republic of the Congo who visited Frobisher Bay to apply Arctic tests to cold weather clothing.

Again this year teachers and pupils from all parts of Canada wrote requesting material for class projects. Countries whose colourful postage stamps brightened the mail room included Australia, France, Britain, Germany, the United States, Ghana, Sweden, Nigeria, Republic of the Congo, Tanganyika, Saudi Arabia, Egypt, Kenya, Iraq, and Indonesia.

From Cape Dorset on Baffin Island came the first request for information material from an Eskimo schoolboy because "we want to learn more about Canada".

Legal Division

A complete legal consultative service to the Department is provided by the legal officers of this Division. The Division represents the Department in litigation, advises on the legal implications of departmental policy and legislation, and officers of the Division advise the Canadian delegation to international conferences with respect to legal matters within the jurisdiction of the Department. Advice was given during the year on the liability of the Crown arising out of departmental activity, the drafting of agreements and other documents, legislation and regulations, and legal counsel provided to the Councils of the Yukon Territory and the Northwest Territories.

Personnel Division

The Personnel Division is responsible for planning and recommending departmental personnel policies and procedures and for providing advice to the Deputy Minister and to departmental units on all staff matters. It provides specialized services in position and establishment controls, organization planning, selection and promotion, employee welfare, pay, superannuation, training and development, and other personnel services. During the year, the Division was reorganized into service units to enable it to provide a greater degree of individualized service to the Branches. Complete job analyses were carried out aimed at making this service more effective.

A number of important initiatives were taken to achieve greater consistency in personnel policies and practices throughout the department. These covered such areas as disciplinary action, extensions in employment for those reaching retirement age, and establishment of new hours of work providing for regular early closing during summer months without reducing the total hours worked annually. Preliminary action was taken towards setting up a pre-retirement information service for employees to provide material on retirement benefits, supplementary income, and related subjects.

Another new step was the establishment of a regular medical check-up plan for officers at Division Chief level and higher, or those in lower classifications whose work subjects them to extreme pressure. The plan is entirely voluntary.

Staff services were provided for some 4,500 employees in all provinces and both territories. About 40%—2,008 employees—were classified civil servants and teachers; the rest were prevailing rate employees. Of the total work force, nearly 1,000 were employed in the North.

The Division supervised more than 600 new appointments and held 119 departmental Promotional Competitions. Divisional officers aided with 165 Open Competitions conducted by the Civil Service Commission, served on committees working out the new Civil Service Regulations, and on appeal boards.

The Staff Training Unit gave in-service training courses to more than 306 employees. Subjects included job orientation for new staff, letterwriting, pool supervision, stenography, radio telephone operation and maintenance, first aid and public speaking. The departmental training program for Junior Executive Officers and Junior Officers was given greater emphasis.

Purchasing Division

The Purchasing Division is responsible for procurement of all supplies and equipment needed by the Department. It represents the Department in dealings with suppliers, examines and investigates equipment and supplies, and recommends what should be purchased, operates the central stationery stores and assists in getting supplies to northern Canada.

Rapid expansion of departmental activities has led to increased responsibilities in the purchasing field. With this in mind, the Division has prepared and issued a comprehensive Purchasing Manual to be used throughout the Department. This manual is necessary to ensure consistency in policies and procedures, to assist in training new staff, and to interpret the functions of the Purchasing Division to the Branches.

During 1961-62, there were 19,057 requisitions received and 16,912 purchase orders issued. The Purchasing Division continued to serve the Department of Forestry until January, 1962, when that Department took over responsibility for its own buying. The District Office of the Purchasing Division in Fort Smith filled an increasing share of the District's needs through suppliers in the Northwest Territories.

The restoration program started at the Fortress of Louisbourg National Historic Park produced much of the increase in the Division's activities over the previous year.

Major purchases made during the year included prefabricated houses, equipped with furnishings and supplies, for shipment to the North.

Special Programs

Campgrounds and Picnic Areas

Administration Services were also concerned with two co-operative federal-provincial programs for the development of campgrounds and picnic areas. One of these, called the Winter Work Campgrounds-Picnic Areas Program, was designed to encourage added employment during the winter months and to help the provinces in meeting the rapidly growing need for campground facilities. This program placed no limit on the total amount of the federal contribution and the choice of the location of the developments rested with the provinces. During the winter of 1961-62, eight provinces accepted the federal offer, and payments were close to \$1,800,000. About 6,700 man-months of employment were provided.

The second program, designed to provide facilities along the Trans-Canada Highway, involves a total federal contribution of \$2,000,000 divided among the provinces in proportion to the highway mileage in each. The objective is to provide one campground every 100 miles along the route of the highway and a picnic ground every 50 miles. Work under this continuing Program may be undertaken at any time during the year.

Roads to Resources¹

The Roads to Resources Program was proposed to the provinces early in 1958. Administration Services has been responsible for the staff work involved in the negotiations with the provinces.

¹ See appendix B, 8.

In 1961-62, two supplementary agreements were signed with New Brunswick: one in May 1961 to substitute two road projects for one which was only generally described in the Main Agreement for the development of very large base metal resources in the north central part of the province; the other for the addition of two new road projects to provide more direct routes for the transportation of lobster and fish, e.g., the Miscou Island-Shippegan Island road and the lower Escuminac Kouchibouguac road.

During 1961-62, over 500 miles of roads were completed under this Federal-Provincial program, bringing the total now completed to 1,800 miles. The whole program envisages the construction or reconstruction of some 4,500 miles of resource development roads towards which the Federal Government is to contribute \$7.5 million to each province.



Northern Co-ordination and Research Centre

Under the Northern Affairs and National Resources Act of December 16, 1953, the Minister was given the responsibility for fostering knowledge of the Canadian North and of means to bring about its further development. To aid in the discharge of this responsibility, the Northern Co-ordination and Research Centre was established in 1954, reporting through the Secretary of the Advisory Committee on Northern Development.

The Centre has three main functions relating to the north: to collect and disseminate scientific and technical data, co-ordinate scientific research, sponsor and conduct scientific research.

Information

Information on the north is provided mainly through the Northern Affairs Library which is part of the Northern Co-ordination and Research Centre. The Library is responsible for purchasing, collecting, and storing books, periodicals, reports and microfilm material dealing with northern Canada and other polar areas. It maintains map collections of the north, catalogues, files and field photographs and circulates accession lists, periodicals, books and biographies.

Currently the Library has some 5,500 books and periodicals on its shelves. During the year more than 4,000 books were on loan and more than 900 inquiries were answered. This is twice the number of books lent last year and a substantial rise in the volume of inquiries.

Co-ordination

The Centre co-ordinates northern research by making available the services of its Secretariat for departmental and interdepartmental scientific research committees.

It provides the secretary for the scientific research sub-committee of the Advisory Committee on Northern Development. This sub-committee is made up of senior representatives of all departments carrying out scientific programs in the north. A second officer is secretary to the Departmental Northern Research Committee composed of all branch directors with an interest in northern research.

The Centre also issues licences and permits to scientists, explorers and archaeologists desiring to carry out research in the Northwest Territories. During the year 58 scientists' and explorers' licences were issued and 12 permits to archaeologists and ethnologists.

Scientific Research Station

A plan to establish a permanent scientific research station at Inuvik was approved by the scientific research sub-committee of the Advisory Committee on Northern Development.

The station, 8,000 square feet, will provide facilities for government and university scientists and other research workers. It will accommodate a resident staff of eight and up to 16 visiting scientists on a monthly basis. The Northern Co-ordination and Research Centre will be responsible for the management.

Facilities will include laboratories with water, gas, electrical and ventilating equipment, workshop, photographic and dark rooms, frozen storage space for specimens, fish and animal specimen room and combined library and seminar room.

Research

The Centre carries out scientific research on the north of two broad types.

It sponsors and conducts investigative programs in northern Canada and other northern areas, and in fields only marginally studied by other agencies. These studies have included biology, history, linguistics, physics, library administration and climate.

The main program is directed towards social anthropology and related subjects. These studies explore the effects of social and economic change on the lives of the northern native people and resulting administrative implications. Research is carried out by the Centre, by seasonally employed scientists, by scientists under contract to the Department and by those awarded grants-in-aid for this work.

Close liaison is maintained with the growing number of organizations concerned with polar research in, and outside, Canada. For many years an annual grant has been made to the Arctic Institute of North America. This aid is now being extended to other northern institutes and scientific expeditions in Canada. Grants are made by the Minister of Northern Affairs with the advice of a Grants Committee made up of representatives of the scientific research sub-committee of the Advisory Committee on Northern Development, and Canadian universities.

Projects

Seven social anthropological projects were sponsored in 1961-62. At Igloolik and in the Thom Bay area, in the eastern Arctic, a social and economic survey of the Eskimo people was carried out and a similar study made of Indians and Metis at Old Crow in Yukon Territory. The Wakeham Bay region of Ungava was studied and, as an extension of earlier work, three social scientists from the University of Toronto examined living conditions and welfare problems of Indians and Metis hunting and trapping in the Mackenzie District. Social surveys of varying types were carried out in the Inuvik and Aklavik regions, at Resolute on Cornwallis Island, and a study of settlement patterns in the Northwest Territories undertaken.

A two-year comparative study of Eskimo administration in Alaska, Greenland, and parts of Canada was extended to Labrador. The results will be valuable to the administration at Ottawa.

Landing conditions at Winter Harbour, Bridport Inlet, and Skene Bay were assessed, and the Russian Bering Strait Dam scheme examined in more detail.



APPENDICES

Appendix A

SUMMARY OF REVENUES AND EXPENDITURES 1961-62

	<i>Revenues</i>	<i>Expenditures</i>
ADMINISTRATION SERVICES	\$ 92	\$ 1,138,882
Contributions to the Provinces for Campground and Picnic Area Developments		1,700,000
Roads to Resources		12,000,000
NORTHERN CO-ORDINATION AND RESEARCH CENTRE		124,840
NATIONAL PARKS BRANCH		
Branch Administration		266,747
National Parks and Historic Sites	2,108,836	27,686,342
Grant to Jack Miner Migratory Bird Foundation		5,000
Grant in aid of the development of the Inter- national Peace Garden in Manitoba		15,000
National Aviation Museum		125,261
National Battlefields Commission		211,286
Canadian Wildlife Service	3,936	822,064
	2,112,772	29,131,700
WATER RESOURCES BRANCH		
Branch Administration and Construction	126,154	1,950,515
Fraser River—federal expenditures in connection with investigations carried out by the Fraser River Board		300,077
Contributions to the Provinces towards the con- struction of dams and other works to assist in the conservation and control of water re- sources in accordance with agreements entered into between Canada and the Provinces		156,011
	126,154	2,406,603
NORTHERN ADMINISTRATION BRANCH		
Branch Administration	8,186	1,163,827
(Public Lands)	223,010	
Education	20,672	6,995,024
Welfare and Industrial	419,793	2,735,985
Yukon Territory	613,811	6,971,591
Northwest Territories	2,249,123	14,090,621
	3,534,595	31,957,048
NATIONAL MUSEUM OF CANADA	1,417	873,189
CANADIAN GOVERNMENT TRAVEL BUREAU	4,356	2,974,851
GENERAL		32,705
TOTALS FOR DEPARTMENT	5,779,386	82,339,818

Appendix B

1. Mineral Production

NORTHWEST TERRITORIES				
1960		1961*		
	Quantity	Value	Quantity	Value
		\$		\$
Gold.....	418,104 ozs.	14,194,631	402,580 ozs.	14,267,435
Silver.....	79,473 ozs.	70,659	75,568 ozs.	71,049
Copper.....	1,040,000 lbs.	315,016	972,000 lbs.	272,000
Nickel.....	3,813,778 lbs.	2,669,645	3,500,000 lbs.	2,600,000
Pitchblende.....	1,077,211 lbs.	9,231,698	419,000 lbs.	2,782,000
TOTAL.....	—	26,481,649	—	19,992,484

YUKON TERRITORY				
1960		1961*		
	Quantity	Value	Quantity	Value
		\$		\$
Gold.....	78,115 ozs.	2,652,004	67,775 ozs.	2,401,946
Silver.....	7,217,361 ozs.	6,416,956	7,096,386 ozs.	6,672,022
Lead.....	20,286,871 lbs.	2,166,638	17,484,845 lbs.	1,792,197
Copper.....	—	—	880,000 lbs.	256,872
Zinc.....	13,402,899 lbs.	1,789,287	12,198,639 lbs.	1,534,589
Cadmium.....	145,496 lbs.	206,604	133,776 lbs.	214,042
Coal.....	6,470 tons	97,156	7,804 tons	115,243
Platinum.....	19 ozs.	1,553	—	—
TOTAL.....	—	13,330,198	—	12,986,911

* Preliminary Figures.

2. Timber Permits Issued and Value of Timber Cut 1961-1962

No. of Permits issued	Northwest Territories including Wood Buffalo National Park			
Commercial Permits.....	13			
Other Permits:				
Free of fees and dues.....	20			
Free of Dues.....	11			
Dues Paid.....	91			
TOTAL PERMITS ISSUED.....	135			

Volume of Timber Cut	Lumber (F.B.M.)	Round Timber (Lin. ft.)	Fuelwood (Cords)	Trees
Commercial Permits.....	15,934,298	240	403	—
Other Permits:				
Free of Fees and Dues.....	448,383	10,200	69	—
Free of Dues.....	—	3,333	702	—
Dues Paid.....	44,000	127,140	1,377	—
TOTAL.....	16,426,681	140,913	2,551	—

2. Timber Permits Issued and Value of Timber Cut 1961-1962 (Continued)

Quantity in Merchantable Cubic Feet					Total Cubic feet	Total Stumpage Dues
Block	Logs	Pulpwood	Fuelwood	Roundwood		
1961/62						\$
W.B.N.P.....	2,719,570	—	46,160	2,800	2,768,530	14,834.12
N.W.T.....	381,775	—	168,880	78,570	629,225	9,339.59
GRAND TOTAL..	3,101,345	—	215,040	81,370	3,397,755	24,173.71

1. The Canada Mining Co. -61/62 return was 1,219,646 f.b.m. of production.

2. The Mackenzie Delta logging project was 320,383 f.b.m. of production.

YUKON TERRITORY

Type of Permit	Permits Issued	Lumber (FBM)	Round Lumber (Lin. Ft)	Fuel Wood (Cords)	Revenue
\$					
Commercial.....	38 (36 berths)	3,821,508	40,125	873	22,568.21
General.....	210	—	150,599	3,707	4,366.53
Free of Fess & Dues.....	16	—	6,000	315	Nil
Free of Dues.....	3	—	—	40	6.00
TOTAL.....	—	3,821,508	196,724	4,935	26,940.74

3. Land Sales and Leases

LAND SALES	Yukon	Northwest Territories
Completed during year.....	79	34
New agreements of sale executed during year.....	31 (a)	9 (b)
Total number of agreements of sale in force.....	151 (d)	43 (c)

NOTE:

(a) includes 13 agreements for veterans

(b) includes 1 agreement for veteran

(c) includes 26 agreements for veterans

(d) includes 103 agreements for veterans

LAND LEASES

New leases executed during year.....	178	149
Assignments registered during year.....	36	6
Total leases in force		
Agricultural.....	13	20
Commercial.....	139	219
Fur Farm.....	1	2
Grazing.....	18	2
Quarrying.....	—	4
Recreational.....	1	1
Religious and Educational.....	9	20
Residential.....	291	135
Licences of Occupation.....	3	—
Permissions to Occupy.....	2	1
TOTAL.....	477	404

4. Progress in School Enrolment

(Includes only children of school age 6=16th Birthday)

	1950-51			1961-62		
	School Age	In School	Per cent In School	School Age	In School	Per cent In School
Eskimo.....	2,464	194	8	3,171	1,870	59
Indian.....	1,027	368	36	1,375	1,101	80
*Other.....	1,627	621	38	2,123	2,019	95
	5,118	1,183	23	6,669	4,990	75

* Includes Metis.

5. Vocational Registrations—1961-62 Academic Year

	Eskimo	Indian	Other	Total
Sir John Franklin School.....	34	66	29	129
Special courses.....	11	23	21	55
On-the-Job Training.....	—	—	1	1
Training in southern Canada.....	4	7	33	44
	49	96	84	229

6. School Enrolment September 30, 1961—Mackenzie Education District

School	No. Rooms**	Teaching Staff	Eskimos	Indians	Others	Total
Aklavik.....	7	8	62	33	47	142
Arctic Red River.....	1	1	—	17	4	21
Cambridge Bay.....	2	2	45	—	3	48
Coppermine.....	2	2	46	—	2	48
*Discovery.....	1	1	—	—	14	14
Fort Franklin.....	2	2	—	49	—	49
Fort Good Hope.....	2	1	—	33	5	38
Fort Liard.....	1	1	—	14	5	19
Fort McPherson.....	6	7	—	110	37	147
Fort Norman.....	2	2	—	23	26	49
Fort Providence.....	2	2	—	34	14	48
Fort Resolution.....	5	4	—	24	112	136
Fort Simpson.....	10	18	—	197	88	285
Fort Smith.....	23	28	—	213	435	648
Fort Wrigley.....	1	1	—	14	—	14
Hay River.....	11	15	—	40	285	325
Inuvik.....	28	34	307	128	239	674
Jean Marie River.....	1	1	—	15	—	15
Lac La Martre.....	1	1	—	16	—	16
Nahanni Butte.....	1	1	—	13	1	14
Norman Wells.....	1	1	—	—	22	22
Old Crow.....	2	2	—	41	10	51
Rae.....	4	4	—	78	9	87
Reindeer Station.....	1	1	21	—	—	21
Snowdrift.....	1	1	28	—	—	28
Spence Bay.....	1	1	17	—	1	18
Tuktoyaktuk.....	4	4	79	2	7	88
Sir John Franklin.....	5	16	20	35	116	171
Yellowknife Public.....	18	21	—	—	379	379
Yellowknife Separate.....	11	12	—	23	205	228
	157	195	625	1,152	2,066	3,843
GRAND TOTALS.....	222	266	2,013	1,191	2,170	5,374

* Company School

** Figures are for regular classrooms only.

7. School Enrolment September 30, 1961—Arctic Education District

School	No. Teaching		Eskimos	Indian	Other	Total
	Rooms**	Staff				
Arctic Bay.....	1	1	30	—	—	30*
Baker Lake.....	4	4	80	—	4	84
Belcher Islands.....	1	1	13	—	—	13
Broughton Island.....	1	1	30	—	—	30
Cape Dorset.....	2	2	38	—	—	38*
Chesterfield Inlet.....	4	4	108	—	6	114
Clyde River.....	1	1	22	—	—	22
Coral Harbour.....	2	2	59	—	—	59
Eskimo Point.....	2	2	50	—	—	50
Fort Chimo.....	5	5	95	1	21	117
Frobisher Bay.....	13	16	184	—	62	246
Great Whale River.....	5	7	85	38	2	125
Igloolik.....	2	2	31	—	—	31
Ivuyivik.....	1	1	25	—	—	25
Koartak.....	1	1	15	—	—	15
Pangnirtung.....	1	1	29	—	2	31
Payne Bay.....	2	2	38	—	—	38
Pond Inlet.....	1	1	30	—	—	30
Port Harrison.....	2	2	33	—	—	33
Povungnetuk.....	4	4	117	—	—	117
Rankin Inlet.....	5	6	140	—	—	140
Resolute Bay.....	1	1	21	—	—	21
Sugluk.....	2	2	43	—	—	43
Wakeham Bay.....	1	1	36	—	—	36
Whale Cove.....	1	1	36	—	7	43
	65	71	1,388	39	104	1,531

* Estimate.

** Figures are for regular classrooms only.

8. Roads to Resources

A program of road construction, the costs of which are being shared by the provinces and the federal government, has been instituted and is known as Roads to Resources. These roads are intended to improve the accessibility of areas which are potentially rich in natural resources. In Western Canada, Ontario, Quebec, Newfoundland and New Brunswick, these resources are principally lumbering and mining. In Nova Scotia and Prince Edward Island, the chief resource is tourism. Programs in the various provinces vary in length from 5 to 11 years, however, the federal contribution is the same for each province—\$7,500,000. The cost of the total program to the federal government will be \$75,000,000. The status of the program at March 31, 1962, is as follows:

	Total Mileage in Program	Mileage Under Construction	Mileage Completed	Estimated Total Cost of Program	Contracts Approved to Date	Expenditure by Province to Date	Payments by Canada to Date	Commence- ment Date	Term of Years	Date Agreement Signed
	\$			\$	\$	\$	\$			
Newfoundland.....	318.15	55.00	173.65	16,058,800	10,070,212	4,007,288	1,929,907	June 26, 1958	11	Dec. 15, 1959
Prince Edward Island.....	442.25	111.30	228.90	15,000,000	10,306,453	7,094,172	3,547,086	July 2, 1958	7	Dec. 15, 1959
Nova Scotia.....	489.30	149.30	272.20	16,880,437	12,439,746	9,625,596	4,799,999	May 2, 1958	7	Dec. 14, 1959
New Brunswick.....	423.20	145.68	31.70	19,815,000	8,793,819	6,909,684	2,879,163	May 1, 1958	10	Dec. 14, 1959
Quebec.....	248.00	Nil	123.00	13,055,000	5,596,287	1,495,015	747,507	Oct. 18, 1960	5	Oct. 18, 1960
Ontario.....	393.00	18.00	188.00	13,950,000	10,158,765	7,384,226	3,272,380	Nov. 6, 1958	8	Dec. 22, 1959
Manitoba.....	692.90	139.00	247.90	19,370,000	11,527,386	8,954,368	4,235,819	May 27, 1958	7	Dec. 21, 1959
Saskatchewan.....	811.10	73.40	263.60	21,650,000	11,649,089	8,915,623	4,457,811	May 5, 1958	7	Mar. 11, 1960
Alberta.....	415.95	160.42	134.00	20,380,000	13,027,950	9,949,148	4,974,574	Apr. 14, 1958	6	Dec. 23, 1959
British Columbia.....	320.90	81.53	95.60	20,500,000	13,810,000	7,812,960	3,906,480	Aug. 21, 1957	5	Nov. 4, 1958
	4,554.75	933.63	1,758.55	176,659,237	107,379,707	72,148,080	34,750,726			

NOTES 1. Agreements with Ontario and Quebec provide for the later inclusion of other projects, to bring the total programs to \$15 million for each province.

2. The figures for "Expenditures by Province to Date" include only figures reported by the provinces to the federal government; this column therefore understates the true present position.

Appendix C

**1. Location, Area and Comparative Statement of Visitors to the National Parks,
April 1, 1961 to March 31, 1962**

	Province	Area	1961-62	1960-61	Increase or Decrease
NATIONAL PARKS					
Banff.....	Alta.	2,564 sq.mi.	1,069,623	1,078,008	- 8,385
Cape Breton Highlands.....	N.S.	367 "	371,686	323,392	+ 48,294
Elk Island.....	Alta.	75 "	183,263	198,277	- 15,014
Fundy.....	N.B.	79.5 "	280,006	227,262	+ 52,744
Georgian Bay Islands.....	Ont.	5.4 "	14,230	19,657	- 5,427
Glacier.....	B.C.	521 "	10,213	287	+ 9,926
Jasper.....	Alta.	4,200 "	346,493	356,538	- 10,045
Kootenay.....	B.C.	543 "	470,562	467,555	+ 3,007
Mount Revelstoke.....	B.C.	100 "	64,901	38,634	+ 26,267
Point Pelee.....	Ont.	6 "	485,637	545,545	- 59,908
Prince Albert.....	Sask.	1,496 "	140,650	137,801	+ 2,849
Prince Edward Island.....	P.E.I.	7 "	775,583	412,463	+363,120
Riding Mountain.....	Man.	1,148 "	642,931	629,140	+ 13,791
St. Lawrence Islands.....	Ont.	.4 "	86,150	61,522	+ 24,628
Terra Nova.....	Nfld.	153 "	29,710	20,000	+ 9,710
Waterton Lakes.....	Alta.	203 "	420,865	349,496	+ 71,369
Yoho.....	B.C.	507 "	99,160	65,071	+ 34,089
SUB-TOTAL.....		11,975.30 "	5,491,663	4,930,648	+561,015
NATIONAL HISTORIC PARKS AND MAJOR HISTORIC SITES					
*Alexander Graham Bell					
Museum.....	N.S.	14 acres	73,682	59,784	+ 13,898
*Batoche Rectory.....	Sask.	1.25 "	15,641	5,896	+ 9,745
Fort Amherst.....	P.E.I.	222 "	1,452	893	+ 559
Fort Anne.....	N.S.	31 "	69,646	57,140	+ 12,506
Fort Battleford.....	Sask.	37 "	27,511	28,992	- 1,481
Fort Beausejour.....	N.B.	81 "	43,543	31,719	+ 11,824
Fort Chambly.....	P.Q.	2.5 "	62,533	68,738	- 6,205
Fort Langley.....	B.C.	9 "	104,961	91,627	+ 13,334
Fort Lennox.....	P.Q.	210 "	32,890	30,725	+ 2,165
Fortress of Louisbourg.....	N.S.	399.5 "	30,036	23,915	+ 6,121
Fort Malden.....	Ont.	8 "	37,334	41,558	- 4,224
Fort Wellington.....	Ont.	8.5 "	38,685	35,449	+ 3,236
Grand Pre.....	N.S.	14 "	47,392	34,361	+ 13,031
Halifax Citadel.....	N.S.	37 "	229,677	204,677	+ 25,000
Lower Fort Garry.....	Man.	13 "	50,234	42,787	+ 7,447
Port Royal Habitation.....	N.S.	20.5 "	20,922	19,842	+ 1,080
Prince of Wales' Fort.....	Man.	50 "	414	1,251	- 837
Signal Hill.....	Nfld.	243.37 "	137,600	112,054	+ 25,546
*Sir Wilfrid Laurier's					
Birthplace.....	P.Q.	1.5 "	7,668	7,634	+ 34
Woodside.....	Ont.	11 "	7,797	5,170	+ 2,627
SUB-TOTAL.....		1,414.12 "	1,039,618	904,212	+135,406
GRAND TOTAL.....			6,531,281	5,834,860	+696,421

* Major Historic Sites.

N.B.—No attendance records available for Wood Buffalo National Park, Alberta—N.W.T. (17,300 sq.mi.).

2. Attendance at Parks Film Screenings

	1961		
	Total Park Visitors	Film Attendance	Per Cent Film Attendance
Jasper.....	332,000	6,300	1.9
Banff.....	1,038,000	45,000	4.4
Prince Albert.....	140,000	2,900	2.1
Riding Mountain.....	696,000	14,700	2.1
Kootenay.....	498,000	7,900	1.6
Yoho.....	93,000	1,800	1.9
Cape Breton.....	478,000	2,700	.57
Waterton.....	428,000	11,000	2.6
Fundy.....	292,000	10,000	3.4
Elk Island.....	184,000	1,200	.65
P.E.I.....	775,000	5,300	.68
Point Pelee.....	527,000	9,200	1.7

Average Film Screening Attendance — Approximately 2% of all parks visitors.

3. Attendance at Museums in National Parks

	1961		
	Total Park Visitors	Attendance Museum	Per Cent Attendance
Banff.....	1,038,000	43,000	4.1
Prince Albert.....	140,000	15,000	10.7
P.E.I.....	775,000	38,000	4.9
Riding Mountain.....	696,000	23,000	3.4

Average attendance at Museums — 5.8% of all parks visitors.

4. Mileage of Park Roads and Trails

National Parks	Motor Roads	Secondary Roads	Fire Roads	Trails
Banff.....	216.50	—	158.25	720.25
Cape Breton Highlands.....	57.06	10.42	63.94	23.12
Elk Island.....	18.00	4.00	7.50	46.00
Fundy.....	19.90	—	36.10	4.10
Georgian Bay Islands.....	—	—	10.75	18.40
Glacier.....	27.30	—	—	107.00
Jasper.....	104.00	66.00	95.50	622.25
Kootenay.....	59.40	—	56.80	214.00
Mount Revelstoke.....	27.10	—	—	37.50
Point Pelee.....	11.50	2.00	2.00	1.50
Prince Albert.....	65.70	67.75	—	288.75
Prince Edward Island.....	20.00	7.25	3.00	3.00
Riding Mountain.....	75.05	13.56	110.00	20.00
Terra Nova.....	30.94	3.18	3.50	6.65
Waterton Lakes.....	42.70	—	18.50	106.50
Yoho.....	41.10	—	47.00	244.00
TOTALS.....	816.25	174.16	612.84	2,463.02

5. Forest Fire Losses in the National Parks

Park	Number of Fires		Area Burned (Acres)		Suppression Costs	
	1956-60 Av.	1961	1956-60 Av.	1961	1956-60 Av.	1961
					\$	\$
Banff.....	6.2	10	2.1	spot	350.41	1,550.00
Jasper.....	8.4	9	965.4	372.5	4,791.72	7,242.60
Glacier.....	1.4	1	22.6	spot	2,637.00	—
Kootenay.....	2.0	1	1.7	22.0	1,608.92	4,043.69
Yoho.....	4.0	3	481.0	spot	12,471.88	259.30
Mount Revelstoke...	.8	—	280.8	—	2,148.40	—
Waterton Lakes.....	.6	—	.1	—	17.36	—
Elk Island.....	.4	—	.8	—	3.50	—
Prince Albert.....	.8	5	.3	857.1	154.43	6,796.95
Riding Mountain.....	5.2	25	647.8	43,144.3	1,677.32	85,465.90
Georgian Bay.....	—	—	—	—	—	—
St. Lawrence Islands..	.4	1	.5	3.0	7.46	8.30
Point Pelee.....	.2	—	.1	—	3.00	—
Fundy.....	.4	—	—	—	2.00	—
Prince Edward Island.....	.4	2	.3	6.1	—	—
Cape Breton Highlands.....	.8	1	1.6	3.0	144.71	331.00
Terra Nova.....	.4	5	.2	1,152.5	31.50	4,153.31
TOTALS.....	32.4	63	2,405.3	45,560.5	26,049.61	109,851.05

6. 1961 Forest Fires*

	1961	1951-60 (Annual Average)
Number of Fires	63	31.5
Area Burned (Acres)	45,560	3,361.6
Suppression Cost	\$ 109,851.06	\$ 17,523.17

Causes

Camp fires	7
Smokers	15
Settlers	6
Railways	2
Lightning	14
Industrial	1
Incendiary	10
Public Works	2
Misc. Known	4
Unknown	2
TOTAL	63

Size Classes

A — Less than $\frac{1}{4}$ acre	29
B — $\frac{1}{4}$ - 10 acres	14
C ₁ —10-100 acres	8
C ₂ —100-500 acres	6
D — over 500 acres	6
TOTAL	63

Note 1—Riding Mountain National Park accounted for 25 fires, 43,144 acres burned and \$85,465.90 in suppression costs.

* Does not include Wood Buffalo National Park.

7. Major Construction in Parks

	By National Parks	By Private Enterprise
BANFF.....	Service Building and shelter at Waterfowl Lakes Campground. Ski patrol hut completed on Whitehorn. Service Buildings at Two Jack Lake and Johnson Canyon Campgrounds, Tunnel Mountain Trailer Park, and Lake Minnewanka picnic area. Wardens residences—Paddock area and Eisenhower District, and Wardens winter cabin near Mount Temple Chalet. Lumber storage shed in park maintenance area. Fall-out reporting posts, Eisenhower, Healey Creek, Yahatinda Ranch and Buffalo Paddock Warden Residence. Duplex staff residence. Service Building Administration Office area.	100 building permits issued for total construction value of \$2,155,291. Banff School of Fine Arts made two additions to No. 4 chalet. R.C.M.P. built a four apartment duplex. Permits were issued for three town residences and two in outlying areas, including a residence and garage for the Department of Forestry. Construction was completed on the tea-room for the gondola lift upper terminal. The Standish business block was completed. Three ski lifts built in the park for a total value of \$96,000. They include a T-bar at Sunshine and poma lifts at Norquay and Mount Temple Chalet. Banff Curling Rink completed and in operation.
CAPE BRETON HIGHLANDS.....	Pipe and lumber storage building Ingonish Beach Compound. Valve house, chlorinator building, reservoir and two pump-houses at Broad Cove. Toilet building at Lone Shieling. Fire equipment building, storage building, and vehicle and equipment storage building, Cheticamp Compound. Two kitchen shelters, toilet and shower building Cheticamp Campground. Garage and Fire Equipment Building—Warren Brook. Paving completed on Cabot Trail.	
ELK ISLAND.....	Sewer lift station at Headquarters area. Two new staff residences. Maintenance garage in compound area. Garage and Equipment Storage Building—Astotin Lake Warden Station.	
FUNDY.....	Work continued in Point Wolfe Campground. Transformer, vault, septic tank and chlorinators completed. Two brick toilet buildings and laundry building completed. Sewer, water and electrical services installed. Pump-house built at Herring Cove. Constructed concrete service tunnel on perimeter of swimming pool. Carpentry, Plumbing and Electrical Shop constructed. New "Pro" Shop—Golf Course. Lumber storage shed built near park saw mill.	
GEORGIAN BAY ISLANDS	Commenced construction of incinerator.	Midland YM-YWCA-new staff cabin. London YM-YWCA-new guest cabin. Calvary Baptist Camp-new sleeping cabin.
GLACIER.....	Powder and ammunition magazine Hermit Creek. Chip storage bin building constructed. Mount Fidelity Avalanche Warning Station, made up of research, observers living and married	

7. Major Construction in Parks (Continued)

	By National Parks	By Private Enterprise
	quarters, storage shed, Sno-cat garage and generator house was constructed. Warden Residence—Glacier District. Construction commenced on Service Garage, Workshop, Stores and 12-Bay Vehicle Storage Building in Rogers Pass.	
JASPER.....	Five fall-out shelters constructed. Auxiliary water system installed at fish hatchery. Wardens cabin, Brazeau District. Barn at Willow Creek Headquarters. Light plant building—Devona Headquarters.	94 building permits issued for a value of \$467,946. Gymnasium—arena 98% completed. Five residences, one store addition, workshop and Parish Hall completed. Still under construction—nine residences, garage, hotel, ski lodge (Whistlers Mountain) and eight cabins, (Jasper Park Lodge).
KOOTENAY.....	Horse barn at Kootenay Crossing Warden Station. Two toilet buildings and three kitchen shelters Redstreak Campground. Calcium Chloride storage shed McKay Creek Compound. Barn—Marble Creek. Commenced construction New Administration Building. Addition to Warden Equipment Building.	Combined power-house—staff building Vermilion Crossing Bungalow Camp.
MOUNT REVELSTOKE....	Two kitchen shelters Balsam Lake. One kitchen shelter at the Summit. Generator house at west gate. Silver Creek bridge replaced. Commenced site development at compound area.	
POINT PELEE.....	Park Gateway building completed.	
PRINCE ALBERT.....	Three semi-detached duplexes completed. Stand-by powerhouse in compound area. Service Building in extension to Trailer Park.	One cottage constructed. Addition to horse livery building. Renovations and improvements to Lakeview Hotel. Addition to Skyline Motel.
PRINCE EDWARD ISLAND	Central stores building. One life-guard hut. Nine kitchen shelters. Four toilet and shower buildings and one laundry building. One three-car garage. Continued repairs to Green Gables House. New comfort stations at Brackley.	
RIDING MOUNTAIN....	New warehouse building in work compound. Commenced installation of sewer and water systems, Wasagamung. Warden residence, McKinnon Creek. Barns at Moon Lake and Whirlpool. Garage-workshop buildings at McKinnon Creek and Whirlpool. Ten kitchen shelters and boat concession building. Four nuclear fall-out reporting stations completed.	42 building permits issued for a total value of \$64,625. Includes four summer residences, six unit motel, bathhouse, two auditoriums, storage building and water tank.
ST. LAWRENCE ISLANDS..	Wharf replaced at Aubrey Island. New wharf, Gordon Island. Twenty floating docks constructed. Boat-house area fenced. Compound area enlarged.	

7. Major Construction in Parks (Concluded)

	By National Parks	By Private Enterprise
TERRA NOVA.....	Information building. Warden patrol cabins Dunphy's Pond and Park Harbour. Two toilet and shower buildings in the campground. Nine bungalow cabin units. Construction started on staff administration building for cabin development.	
WATERTON LAKES.....	Two staff garages constructed. Wardens equipment building. Water Reservoir and Sewage Disposal Systems constructed—Compound area.	Alberta Liquor Control Board store. School gymnasium constructed. Mormon Church completed.
YOHO.....	Dining hall bunkhouse building constructed. Lumber storage shed. 3 picnic shelters in Kicking Horse Campground.	Two additional cabins, Lake O'Hara Lodge.

8. Statement of Large Mammals in Fenced Enclosures in National Parks

National Park	Buffalo	Elk	Moose	Mule Deer	Total
Banff Park Paddock.....	4	—	—	—	4
Elk Island Park Paddock.....	564	232	224	295	1,315
Prince Albert Park Paddock.....	14	—	—	—	14
Riding Mountain Park Paddock.....	38	—	—	—	38
Waterton Lakes Park Paddock.....	27	—	—	—	27
	647	232	224	295	1,398

9. Reduction of Mammals

National Park	Mammal	Number Killed	Disposal of Meat and Hides
BANFF.....	Elk	197	Meat and hides were sent to the Indian Affairs and Northern Administration Branches.
ELK ISLAND.....	Buffalo	230	Meat sold through Industrial Division of Northern Administration Branch. 85 hides sold by tender, balance of hides reserved by Department.
	Beaver	13	Felts were sold for \$170.12.
WATERTON LAKES.....	Buffalo..	9	2 carcasses used at departmental work camp, 7 carcasses and 9 hides sent to Indian Affairs Branch.

10. Members of Historic Sites and Monuments Board of Canada

Dr. C. Bruce Fergusson, Halifax, Nova Scotia, (Chairman).
 Dr. W. Kaye Lamb, Dominion Archivist, Ottawa, Ontario.
 Professor Donald G. Creighton, Toronto, Ontario.
 R. Earl Taylor, Esq., Charlottetown, Prince Edward Island.
 Richard Y. Secord, Esq., Winterburn, Alberta.
 Professor Margaret A. Ormsby, Vancouver, British Columbia.
 Professor W. D. Smith, Brandon, Manitoba.
 Clifford P. Wilson, Esq., National Museum, Ottawa, Ontario.
 Major Charles Gwyllym Dunn, Quebec, Quebec.
 Arnold L. Agnew, Esq., Prince Albert, Saskatchewan.
 Richmond Mayson, Regina, Saskatchewan. (Retired May 18, 1961).
 Edward B. Foran, Esq., St. John's Newfoundland. (Appointed July 10/61).
 O. L. Vardy, Esq., St. John's, Newfoundland (Retired July 10/61).
 Professor Marcel Trudel, Quebec, Quebec. (Appointed June 29/61).
 Jules Bazin, Esq., Montreal, P.Q. (Retired June 18, 1961).
 Dr. James J. Talman, London, Ontario. (Appointed December 18/61).
 Dr. A. R. M. Lower, Collins Bay, Ontario. (Retired December 18/61).
 Lieutenant-General E. W. Sansom, Fredericton, New Brunswick. (Appointed February 16/62).
 John P. Palmer, Esq., Saint John, New Brunswick. (Resigned February 16/62).
 J. D. Herbert, Esq., National Historic Sites Division, Ottawa, Ontario (Secretary).

11. Tablets Unveiled in 1961

Shipbuilding in Nova Scotia	Yarmouth, Nova Scotia
Rev. Thomas McCulloch	Pictou, Nova Scotia
George Mercer Dawson	Pictou, Nova Scotia
Sir William Van Horne	Montreal, Quebec
Earnscliffe	Ottawa, Ontario.

12. Banding of Wild Birds

Species	Number
Banded in 1961	
Ducks (including Coots).....	43,987
Geese.....	32,379
Trumpeter swan	4
Colony nesting water birds.....	31,284
Other migratory birds.....	40,431
TOTAL.....	148,085
Banded to date.....	1,723,237
Banded birds recovered to date ..	200,418*

* (This total includes birds banded in Canada and recovered in Canada or elsewhere, as well as birds banded outside Canada and recovered in this country.)

13. Licences and Permits Issued under the Migratory Birds Convention Act

Nature of Permit or Licence	Number Issued
To collect birds for scientific purposes.....	443
To take migratory birds for propagation.....	12
To possess migratory birds for propagation.....	792
For bird-banding.....	179
For taxidermy.....	94
TOTAL.....	1,520

Appendix D

NATIONAL MUSEUM

Natural History Branch and Human History Branch

Wednesday Evening Adult English Lectures

- "An Ozark Anthology"—Leonard Hall, Audubon Society.
"A Scientist Takes a Trip"—J. Tuzo Wilson, Ph.D., University of Toronto.
"Alaska"—Neil Douglas, Meriden, Connecticut.
"Designs for Survival"—William A. Anderson, Audubon Society.
"The Frontiers of Space"—Peter M. Millman, Ph.D., National Research Council.
"Travel in Australia"—Dorothy Curtis-Hare, teacher and radio commentator.
"Alberta Outdoors"—Edgar T. Jones, Audubon Society.
"Canoe Travel in the North-West"—Eric W. Morse, M.A., Association of Canadian Clubs.
"Re-living History"—L. S. Russell, Ph.D., National Museum of Canada.
"Cruising the Alaskan Coast"—E. L. Bousfield, Ph.D., National Museum of Canada.
"Nova Scotia—Land of the Sea"—Robert C. Hermes, Audubon Society.
"The Changing Culture of Canadian Women"—T. F. S. McFeat, Ph.D., National Museum of Canada.
"Canadians in Song"—Alan Mills, Montreal.
"Art of the Eskimo"—John K. B. Robertson, Ottawa.
"A Botanist in the Southern Hemisphere"—R. D. Gibbs, Ph.D., McGill University.
"Collecting Antiques"—Jeanne Minhinnick, Upper Canada Village
"Wild Europe"—Roger Tory Peterson, Audubon Society.
"Contrasts in Cuba"—H. W. Pfeffer, Ph.D., Department of Northern Affairs and National Resources.

Special Adult Lectures

- "Javanese Gamelan in the World of Music"—orchestra from the Indonesian Embassy, Washington, D.C.; commentary by Mantle Hood, Ph.D., University of California.
"Climbing in Greenland"—Hans Gsellman, mountain climber and photographer.
"Alpine Holiday"—Frank Solari, mountain climber and photographer. Portuguese film programme.
"Music of East Africa"—K. P. Wachsman, Ph.D., Keeper of Ethnology at the Williams Foundation, London, England.
"The Hunters", "Four Families"—film programme.
"Prairie Waterfowl in Spring"—opening of bird habitat group by the Right Honourable John G. Diefenbaker. Two films were shown: Disney's "The Vanishing Prairie" and N.F.B.'s "Birds of the Prairie Marshes".
A Concert of Traditional Jazz—Ottawa Traditional Jazz Society, under the direction of Mr. Gordon Bennett.
Czechoslovakian film programme.
"The People of Great Slave Lake"—James VanStone, Ph.D., University of Toronto.

Adult French Lectures

- "Crin Blanc", "Victoire sur l'Annapurna"—film programme.
"Le Gouffre de la Pierre Saint-Martin"—Norbert Casteret, French speleologist (with l'Alliance française d'Ottawa).
Le Groupe Saint-Yves des Bretons de Montréal (folk dancers).
"Naissance d'un Géant: le Paquebot FRANCE"—Jacques Grévin, of la compagnie générale Trans-Atlantique (with l'Alliance française d'Ottawa).

Saturday Morning Children's Programs

"Nature's Half Acre", "A World is Born"—film program.

"Beaver Dam", "The Stowaway", "High Arctic", "Life in the Woodlot"—film program.

"The Wonderful World of Jules Verne"—film program.

"This Model Age", "India Welcomes the Queen", Farnborough Air Show"—film program.

Talk on fire prevention by Inspector R. Savary, with two films; also the films "The House I Live In" and "Wind from the West".

"Who Won the Cup"—film program.

"The Living Bird", "Hunting with a Camera", "Life of a Primitive People", "Three Little Bruins in the Woods"—film program.

"The Yearling"—film program.

"The Magic Fiddle", "The Littlest Angel", "The Friendly Beasts", "Capital Skiing", "The Dragon of Cracow", "The Staunch Tin Soldier", "Rumpelstiltskin", "Christmas in Sweden"—film program in co-operation with the Ottawa Film Council.

"Olympic Elk", "The Pony", "Arctic Dog Team"—film program.

Talk on Australia by Mrs. Dorothy Curtis-Hare; also the films "Assignment Children" and "The Zoo in Stanley Park".

"Switzerland", "Understanding our Earth (Glacier)", "The Bear and its Relatives", "Arctic Thrills"—film program.

"King Lavra", "Colonial Family of New France", "Arctic Dog Team", "Birds of Canada", "Ants"—film program.

Talk by Weldon Phipps, Bradley Air Services, on flying in the Arctic; also films "Journey into France" and "Wonders in the Desert".

"Nanook of the North"—film program.

"My Brother Talks to Horses"—film program.

"Honeybees and Pollination", "The Deer and its Relatives", "Story of Peggy at the Farm", "Snookie, the Adventures of a Black Bear"—film program.

Talk by Erik Thorn, National Museum of Canada, on new exhibits; also film "Water Birds".

"Seashore Life", "Grey Gull, the Hunter", "Airplanes Work for Us", "Behind the Scenes of a Museum"—film program.

"Village of Spain", "Kumak the Sleepy Hunter", "World in a Marsh"—film program.

Appendix E

LIST OF TECHNICAL PUBLICATIONS ISSUED 1961-62

National Parks Branch

Canadian Wildlife Service

- Waterfowl reconnaissance in the western Arctic. T. W. Barry. Arctic Circular, 13:4, 51-58.
- Sea-bird colonies of Prince Leopold Island and vicinity. T. W. Barry. Canadian Field-Naturalist, 75:2, 72-73.
- Some characteristics of black duck populations on Prince Edward Island. C. O. Bartlett. Northeast Wildlife Conference, Halifax, Nova Scotia, June 1961.
- Bag limits, kill, and the present status of deer in Nova Scotia. C. O. Bartlett and D. G. Dodds. Northeast Wildlife Conference, Halifax, Nova Scotia, June 1961.
- Ecological aspects of the blue-snow goose complex. F. G. Cooch. The Auk, 78:1.
- Compte-rendu de la réunion de la Commission de l'Élevage, de l'Acclimation et des Maladies du Gibier du Conseil International de la Chasse. L. P. E. Choquette. Lausanne, France, 11-12 et 13 mai 1960, 150-153.
- Parasites and diseases of bison in Canada. 1. Tuberculosis and some other pathological conditions in bison at Wood Buffalo and Elk Island National Parks in the fall and winter of 1959-60. L. P. E. Choquette and J. F. Gallivan, J. L. Byrne, J. Pilipavicius. Canadian Veterinary Journal 2, 168-174, 1960.
- Wildlife in Canada: administration, studies and research. L. P. E. Choquette. Annual Joint Conference of Maritime Veterinary Associations, Sackville, New Brunswick, June 1961.
- Wildlife: studies and research in the field of pathology. L. P. E. Choquette. Joint Meeting of the Society of Veterinary Medicine of the Districts of Montreal and Quebec, Drummondville, P.Q., July 1961.
- Note sur certaines infections et infestations de l'isatis (*Alopex lagopus*) et du renne. (*Rangifer tarandus*) dans le nord Canadien. L. P. E. Choquette. Association canadienne-française pour l'avancement des sciences (ACFAS), Ottawa, Ontario, October 1961.
- In vitro sensitivity of *Leptospira* to various antimicrobial agents. J. G. Cousineau and J. A. McKiel. Can. J. Microbiology 7:751-758.
- Preliminary reports on experimental reclamation with thiodan. J.-P. Cuerrier. Midwest Wildlife Conference, Toronto, December 1961.
- Nest-site tenacity and homing in the bufflehead. A. J. Erskine. The Auk, 78:3.
- Early Saskatchewan bander. J. B. Gollop and A. W. Martin. Blue Jay, 19:3, 118.
- Some data on the polar bear and its utilization in the Canadian Arctic. C. R. Harington. Canadian Wildlife Service, Ottawa.
- House sparrows burrowing in asbestos insulation. R. D. Harris. Canadian Field-Naturalist, 75:3, 162-163.
- Co-operative investigations on barren ground caribou. J. P. Kelsall. Canadian Wildlife Service, Wildlife Management Bulletin, No. 15, Series 1.
- The current status of crop depredation control. R. H. Mackay. 25th Federal-Provincial Wildlife Conference, Ottawa, June 1961.
- Pack dogs in the Canadian Arctic. A. H. Macpherson and T. H. Manning. Polar Record 10:68, 509-512.
- Research on Arctic fox cycles in Central Keewatin District, N.W.T. A. H. Macpherson. Arctic Circular, 13:3.
- On the abundance and distribution of certain mammals in the western Canadian Arctic islands in 1958-59. A. H. Macpherson. Arctic Circular 14:1, 1-17.
- Elements of a wildlife policy. W. W. Mair. Background papers "Resources for Tomorrow" Conference, Vol. 2, 931-936.

- Eider farms of Iceland. D. A. Munro. Canadian Geographical Journal, August 1961.
- Legislative and administrative limitations on wildlife management. D. A. Munro. Background papers "Resources for Tomorrow" Conference, Vol 2, 867-878.
- Botanical collections in the Black Lake region of northern Saskatchewan (1960). G. W. Scotter. The Blue Jay 19, 28-33.
- Summer observations of birds in northern Saskatchewan. G. W. Scotter. The Blue Jay 19, 70-74.
- Notes on behaviour of a marten in Saskatchewan. G. W. Scotter. The Blue Jay 19, 133.
- Lichens of northern Saskatchewan. G. W. Scotter and J. W. Thomson. The Bryologist 64, 240-247.
- Wildlife in Canada's future. V. E. F. Solman. Northeast Wildlife Conference, Halifax, Nova Scotia, June 1961.
- Experimental use of acetylene exploders to control duck damage. W. J. D. Stephen. Trans. 26th North American Wildlife and Natural Resources Conference, Wildlife Management Institute, Washington 5, D.C.
- Status of duck damage control on the Canadian prairies. W. J. D. Stephen. Trans. 51st Convention International Association of Game, Fish, and Conservation Commissioners and American Fisheries Society, Memphis, Tennessee, September 1961.
- Mammal studies by the Canadian Wildlife Service. W. E. Stevens. 41st Annual Meeting American Society of Mammalogists, University of Illinois, June 1961.
- The California big horn in British Columbia with particular reference to the Churn Creek herd. L. G. Sugden. British Columbia Department of Recreation and Conservation. 58 pp.
- The Murres—their distribution, populations and biology. L. M. Tuck. Canadian Wildlife Service Monograph No. 1, Queen's Printer, Ottawa. 260 pp.
- The habitat requirements for snipe (*Capella gallinago*) in Newfoundland. L. M. Tuck. Northeast Wildlife Conference, Halifax, Nova Scotia, June 1961.
- The chronology in Canada of the spring migration of snipe. L. M. Tuck. Rept. No. 1, Snipe Investigations. Canadian Wildlife Service, Ottawa.
- Polythene bags as a means of transporting live trout. J. C. Ward and J. P. Cuerrier, A. C. Colbeck. Great Plains Fisheries Workers' Conference, Calgary, March 1961.

Water Resources Branch

Water Resources Papers

- No. 124 Pacific Drainage, Water Years 1956-57, 1957-58
- No. 125 Arctic and Western Hudson Bay Drainage, Water Year 1957-58
- No. 130 Atlantic Drainage, Water Years 1958-59, 1959-60

Annual Bulletins

1. Principal Thermal-Electric Generating Stations in Canada, with Generating Capacities not less than 1,500 kw., at 31 December 1960. Bulletin No. 2723.
2. Development of Electric Power in Canada—Progress Report, 1961. Bulletin No. 2720-61 (English and French).
3. Water Power Resources of Canada. Bulletin No. 2721-61 (English and French).
4. Principal Power Developments in Canada (a listing of hydro-electric and hydraulic developments with total installed turbine capacities not less than 2,000 hp., and thermal-electric developments with total installed generator capacities not less than 1,500 kw., at 31 December 1961). Bulletin No. 2722-61.

Other Publications

1. Proceedings of Hydrology Symposium No. 1—Spillway Design Floods.
2. Proceedings of Hydrology Symposium No. 2—Evaporation.

Natural History Branch of the National Museum

- The National Museum of Canada 1910 to 1960. L. S. Russell. Dept. N. Aff. & Nat. Res., 37 pp. 1961.
- Malaxis paludosa* (L.) Sw. in the Hudson Bay Lowlands. W. K. W. Baldwin. Can. Field-Nat., 75(2): 74-77. 1961.
- The Vascular Flora of an Alpine Valley in the Mackenzie Mountains, N.W.T. A. E. Porsild. Nat. Mus. Canada, Bulletin, 171: 116-130. 1961.
- Vascular Flora of Liard Hotsprings, B.C., with Notes on some Bryophytes. A. E. Porsild and H. Crum. Nat. Mus. Canada, Bulletin, 171: 131-196. 1961.
- Forest and Peatland at Hawley Lake, northern Ontario. Hugo Sjörs. Nat. Mus. Canada, Bulletin, 171: 1-31. 1961.
- Notes on Plant Occurrence along lower Liard River, Northwest Territories. W. W. Jeffrey. Nat. Mus. Canada, Bulletin, 171: 32-115. 1961.
- Notes on Canadian Mammal Specimens and Types in the British Museum (Natural History), London. A. W. F. Banfield. Nat. Mus. Canada, Bulletin, 172: 112-127. 1961.
- Notes on Mammals of the Kluane Game Sanctuary. A. W. F. Banfield. Nat. Mus. Canada, Bulletin, 172: 128-135. 1961.
- The Canadian Caribou—a disappearing Species. A. W. F. Banfield. UNESCO Courier, Sept. 1961; 24-27.
- The Wood Bison Type Specimen. A. W. F. Banfield. Jour. Mammal., 42(4): 353-354. 1961.
- The Long-tailed Vole in the northern Yukon Territory. A. W. F. Banfield. Can. Field-Nat., 75(4): 263. 1961.
- A Red Bat on Southampton Island, Northwest Territories. A. W. F. Banfield. Can. Field-Nat., 75(4): 264. 1961.
- A Revision of the Reindeer and Caribou, genus Rangifer, A. W. F. Banfield. Nat. Mus. Canada, Bulletin, 177: 137 pp. 1962.
- Notes on Newfoundland Birds. W. E. Godfrey. Nat. Mus. Canada, Bulletin 172: 98-111. 1961.
- First Canadian Record of the Black-throated Sparrow. W. E. Godfrey. Can. Field-Nat., 75(2): 103. 1961.
- Noteworthy Records of Marine Mollusks from the Bay of Fundy. E. L. Bousfield. Nat. Mus. Canada, Nat. Hist. Paper 10: 3 pp. 1961.
- New Records of Beach Hoppers (Crustacea: Amphipoda) from the Coast of California. E. L. Bousfield. Nat. Mus. Canada, Bulletin, 172: 1-12. 1961.
- New Records of Fresh-water Amphipod Crustaceans from Oregon. E. L. Bousfield. Nat. Mus. Canada. Nat. Hist. Paper, 12: 7 pp. 1961.
- Pre-Columbian *Littorina littorea* in Nova Scotia. A. H. Clarke, Jr., and J. S. Erskine. Science, 134(3476): 393-394. 1961.
- Abyssal Mollusks from the South Atlantic Ocean. A. H. Clarke, Jr. Mus. Comp. Zool., Bulletin, 125(12): 243-287. 1961.
- Freshwater Mollusks of the James Bay Watershed—a Progress Report. A. H. Clarke, Jr. Amer. Malacol. Union, Ann. Rept. 1961: 11-12. 1961.
- The Green Snake and the Red-bellied Snake in Saskatchewan. F. R. Cook. The Blue Jay, 19(3): 134-135. 1961.
- Northward Range Extension of the Flathead Chub and Troutperch to Aklavik, N.W.T. D. E. McAllister. Fish. Res. Bd. Canada, Jour. 18(1): 141. 1961.
- Fish Remains from a 600-year-old St. Lawrence River Iroquois Site. D. E. McAllister. Nat. Mus. Canada, Bulletin, 172: 34-38. 1961.
- A Collection of Oceanic Fishes from off British Columbia with a Discussion of the Evolution of Black Peritoneum. D. E. McAllister. Nat. Mus. Canada, Bulletin, 172: 39-43. 1961.

- The Origin and Status of the Deepwater Sculpin, *Myoxocephalus thompsonii*, a Nearctic Glacial Relict. D. E. McAllister. Nat. Mus. Canada, Bulletin, 172: 44-65. 1961.
- Systematics of the Freshwater Sculpins (Cottus) of British Columbia. D. E. McAllister and C. C. Lindsey. Nat. Mus. Canada, Bulletin, 172: 66-89. 1961.
- Placement of the Prowfishes, Zapruidae, in the Superfamily Stichaeoidea. D. E. McAllister and R. J. Krejsa. Nat. Mus. Canada, Nat. Hist. Paper, 11: 4 pp. 1961.
- Biological Investigations at Isachsen, Ellef Ringnes Island, N.W.T. S. D. MacDonald. Nat. Mus. Canada, Bulletin 172: 90-97. 1961.
- Bird and Mammal Observations on Ellef Ringnes Island in 1960. D.B.O. Saville. Nat. Mus. Canada, Nat. Hist. Paper, 9: 6 pp. 1961.
- Amphipod Crustaceans of the Pacific Coast of Canada. E. L. Mills. Nat. Mus. Canada, Nat. Hist. Paper, 15: 21 pp. 1962.
- Toxotherium hunteri, a peculiar new Oligocene Mammal from Saskatchewan. H. E. Wood, 2nd. Nat. Mus. Canada, Nat. Hist. Paper, 13: 4 pp. 1961.
- Mammal Teeth from the St. Mary River Formation (Upper Cretaceous) at Scabby Butte, Alberta. L. S. Russell. Nat. Mus. Canada, Nat. Hist. Paper, 14: 4 pp. 1962.

Human History Branch of the National Museum

- Restos precerámicos de la Cueva de Coxcatlán en el sur de Puebla. R. S. MacNeish. Direction de Prehistoria, Instituto Nacional de Antropología e Historia, Mexico Publicaciones 10: 29 pp. 1961.
- The Santa Marta Rock Shelter, Ocozocoautla, Chiapas (a Preliminary Report). R. S. MacNeish, and Fredrick A. Peterson, Mesa Redonda VIII, Mexico: 41-52. 1961.
- First Annual Report of the Tehuacan Archaeological-Botanical Project. R. S. MacNeish. Papers of the R. S. Peabody Foundation, Andover, 1: 32 pp. 1961.
- The Hopewellian and Weaver Occupations of the Weaver Site, Fulton County, Illinois. Donald Wray and R. S. MacNeish. Illinois State Mus., Sci. Papers, 7(2): 1961.
- Geology of the Engistciak Archaeological Site, Yukon Territory. J. R. Mackay, W. H. Matthews and R. S. MacNeish. Arctic, 14(1): 25-52. 1961.
- The Eskimo: some Comments and Reply. W. E. Taylor. Anthropologica, n.s., 3(1): 85-89. 1961.
- A Distinction Between Blades and Microblades in the American Arctic. W. E. Taylor. American Antiquity, 27(3): 425-426. 1962.
- A Short Note on Upper Lateral Incisor Tooth Crowding among the Eskimos. L. Oschinsky. Anthropologica, n.s., 3(1): 90-94. 1961.
- Issues in the Study of Race. L. Oschinsky. Current Anthropology, 3(1): 35-36. 1962.
- Fraser River Archaeological Project. C. E. Borden. Nat. Mus. Canada, Anthr. Papers, 1: 6 pp. 1961.
- Kinship Recognition and Urbanization in French Canada. M. Rioux. Nat. Museum Canada, Bulletin 173: 1-11. 1961.
- Chéticamp, îlot linguistique du Cap-Breton. G. Dulong. Nat. Mus. Canada, Bulletin 173: 12-41. 1961.
- Historical Background of the Micmac Indians of Canada. W. D. Wallis. Nat. Mus. Canada, Bulletin 173: 42-63. 1961.
- Relations inter-ethniques à la Grande Rivière de la Baleine, baie d'Hudson, 1957. A. Balikci. Nat. Mus. Canada, Bulletin 173: 64-107. 1961.
- The Language of Canada in the Voyages of Jacques Cartier (1534-1538). M. Barbeau. Nat. Mus. Canada, Bulletin 173: 108-229. 1961.
- Bibliography of Anthropological Literature for 1959. T. F. McIlwraith. Nat. Mus. Canada, Bulletin 173: 230-248. 1961.

- Tsimshyan Myths Illustrated. Marius Barbeau. Nat. Mus. Canada, Bulletin 174, 97 pp. 1961.
- The Lynx Point People: the Dynamics of a northern Athapaskan Band. June Helm. Nat. Mus. Canada, Bulletin 176: 193 pp. 1961.
- (book review) Ancient Mexico by Frederick Peterson. R. S. MacNeish. Archaeology, 14(1): 65. 1961.
- Archaeological Activities in the Southwest Yukon—1960. R. S. MacNeish. Arctic Circular, 13(2): 22-25. January 1961.
- Archaeological Activities in Canada—1958-59. Bibliographical Bulletin of American Anthropology, 21-22, part 1: 11-13. 1961.
- Recent Finds Concerned with the Incipient Agriculture Stage in Prehistoric Meso-America. R. S. MacNeish. Homenaje a Pablo Martinez del Rio, en el XXV aniversario de la edicion de Los Origenes Americanos, Mexico: 91-101. 1961.
- The Santa Marta Rock Shelter, Ocozocoautla, Chiapas, Mexico. R. S. MacNeish and F. Peterson. Papers of the New World Archaeological Foundation, No. 14, Publication No. 10, Brigham Young University: 40 pp. 6 plates. 1962.

Northern Co-ordination and Research Centre

Report Series since Inception

- 56 Research report on "Caribou Eskimo Law", G. van den Steenhoven.
- 57-1 A Draft Orthography for the Canadian Eskimo Towards a Future Unification with Greenlandic, G. R. Lefebvre.
- 58 A Pilot Study of Caribou Summer Range (calving ground) at Kaminuriak Lake, N.W.T., by Means of Airphoto Interpretation and Analysis, Dorothy K. B. Beckel.
- 58 The Technical and Economic Implications of the Use of Heat-pumps in the North, A. D. Misener.
- 59 Feasibility Study on the Use of a Diesel-electric Unit for Supplying Power and Heat for Northern Buildings, A. D. Misener.
- 59-1 The Economy and Population Shifts of the Eskimos of Southampton Island, J. W. Van Stone.
- 59-2 The Caribou Eskimo of Eskimo Point, J. W. Van Stone and W. Oswald.
- 59-3 Legal Concepts among the Netsilik Eskimos of Pelly Bay, N.W.T., G. van den Steenhoven.
- 60-1 Preliminary Report on the Bering Strait Scheme, M. J. Dunbar.
- 60-2 Suicidal Behaviour Among the Netsilik Eskimos, Asen Balikci.
- 61-1 The Eskimo Community at Port Harrison, P.Q., W. E. Willmott.
- 61-2 The Human Ecology and Social Economic Change in the Community of Tuktoyaktuk, N.W.T., J. D. Ferguson.
- 61-3 The Subsistence Economy of the Dogrib Indians of Lac la Martre in the Mackenzie District of the N.W.T., June Helm and Nancy O. Lurie.
- 61-4 The Economy of a Frontier Community, J. W. Van Stone.
- 61-5 An Exploratory Study of Ethnic Relations at Great Whale River, W. D. Johnson.
- 61-6 Notes on Winter Harbour, Bridport Inlet, and Skene Bay, T. H. Manning.
- 61-7 The Eskimo of Rankin Inlet; a Preliminary Report, Robert C. Dailey and Lois A. Dailey.

Publications Reviewed

- Abandoned* by Alden Todd, J. R. Lotz, Beaver, Outfit 292, Autumn 1961.
- Ordeal by Ice* by Farley Mowat, J. R. Lotz, New York Times Book Review, Vol. LXVI, No. 23, June 4, 1961; Canadian Geographical Journal Vol. LXIII, No. 5, December 1961; North. Vol. VIII, No. 4, July-August, 1961.

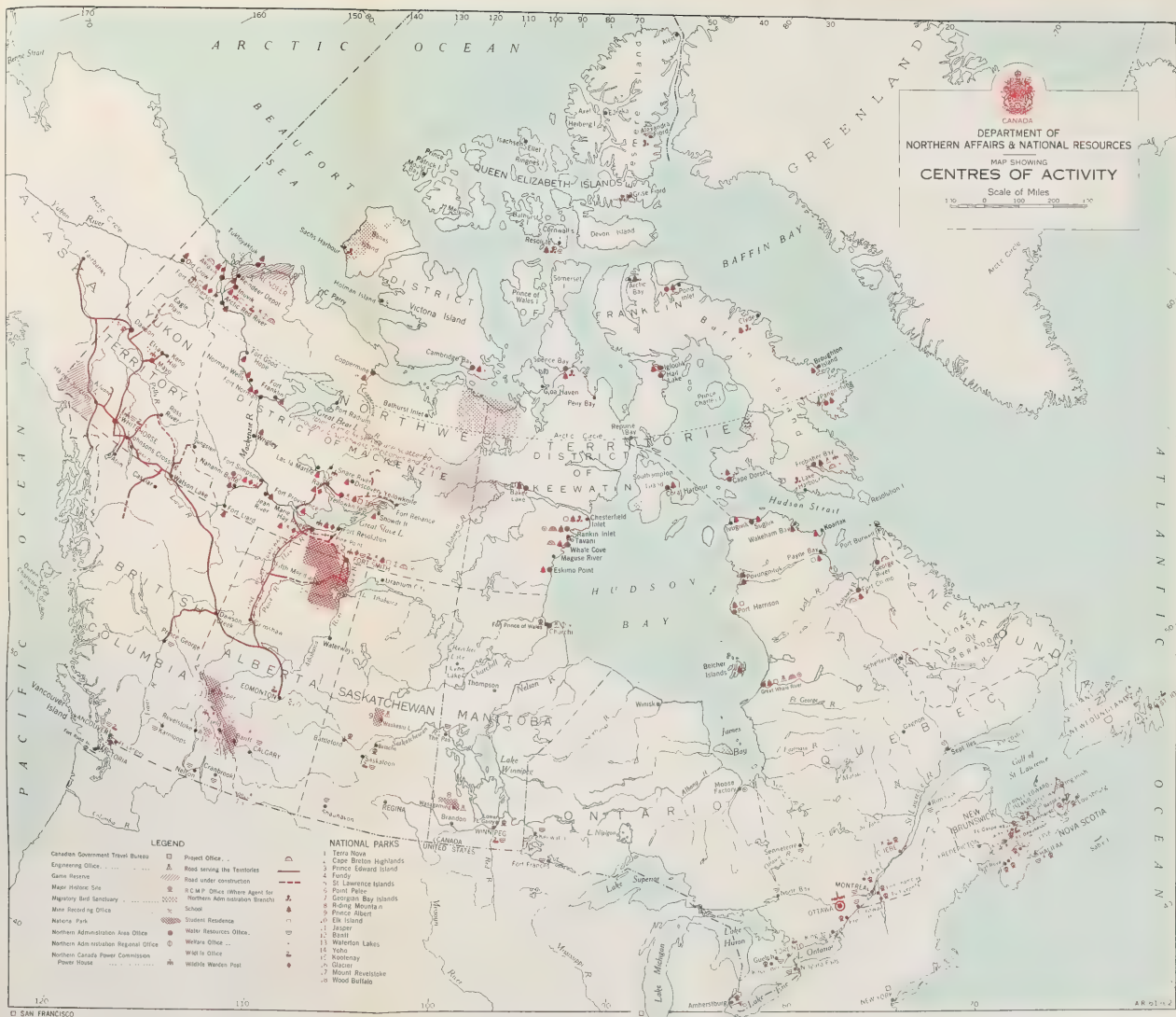
- Hudson's Bay Company 1670-1870* by E. E. Rich, J. R. Lotz, North Vol. VIII, No. 3, May-June 1961.
- Fur Traders Story* by J. W. Anderson, J. R. Lotz, Canadian Geographical Journal Vol. LXIV, No. 2, Feb. 1962.
- The Case for Dr. Cook* by Andrew A. Freeman, J. R. Lotz, New York Times Book Review Vol. LXVI, No. 37, Sept. 10, 1961.
- Ice Atlas of Arctic Canada* by Charles Swithinbank, J. R. Lotz, North Vol. VIII, No. 5, Sept-Oct. 1961.

Articles

- Armed Forces Serve Science, J. P. Croal and J. R. Lotz, Canadian Army Journal, Spring 1961.
- Operation Hazen. The First Summer and the Winter Party, J. R. Lotz, Canadian Geographical Journal Vol. LXIII, No. 2, August 1961.
- Operation Hazen. The Second Summer, J. R. Lotz, Canadian Geographical Journal Vol. LXIII, No. 3, September 1961.
- The McGill Ice Research Project 1955-1960, T. A. Harwood and J. R. Lotz, Polar Record Vol. II, No. 70, January 1962.
- Economic Change in the Mackenzie Valley Area, William C. Wonders, Canadian Geographical Journal Vol. LXIII, No. 4, October 1961.

Papers Presented

- Human Resources of Canada's Northland, Diamond Jenness. Resources for Tomorrow Conference, Montreal, October 1961.
- Research on Northern Settlements, J. Fried, Conference on the Sociology of Occupations and Professions, Carleton Univ., Ottawa, Feb. 1962.
- Comparative Studies among the Canadian Eskimos, F. G. Vallee, The Canadian Political Science Association, Montreal, June 1961.



CANADA
DEPARTMENT OF
NORTHERN AFFAIRS & NATIONAL RESOURCES
MAP SHOWING
CENTRES OF ACTIVITY
Scale of Miles
0 100 200 300 400

LEGEND

- Canada Government Travel Bureau
- Engineering Office
- Game Reserve
- Major Police Site
- Magistry and Sanitary
- Mass Housing Office
- Nature Park
- Northern Administration Area Office
- Northern Administration Regional Office
- Northern Canada Power Commission
- Power House
- Project Office
- Road serving the Territories
- Road under construction
- S.C.M.P. Office (where Agent for Northern Administration Branch)
- School
- Student Residence
- Water Resources Office
- Workers Office
- Wildlife Office
- Wildlife Reserve Post

NATIONAL PARKS

- 1. Terra Nova
- 2. Cape Breton Highlands
- 3. Prince Edward Island
- 4. Fundy
- 5. St. Lawrence Islands
- 6. Point Pelee
- 7. Georgian Bay Islands
- 8. Riding Mountain
- 9. Prince Albert
- 10. Elk Island
- 11. Jasper
- 12. Banff
- 13. Watkins Lakes
- 14. Yoho
- 15. Mount St. Helens
- 16. Mount Revelstoke
- 17. Wood Buffalo

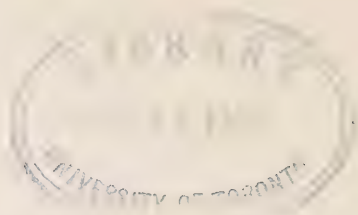


*Department of
Northern Affairs and
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ANNUAL REPORT

FISCAL YEAR 1962-1963

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1964

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Dall sheep diorama at the National Museum of Canada

*The Honourable Arthur Laing, P.C., M.P., B.S.A.,
Minister of Northern Affairs and
National Resources.*

Sir:

I have the honour to submit the Tenth Annual Report of the Department of Northern Affairs and National Resources, for the fiscal year which ended on March 31, 1963.

With this edition, the form of the report has been substantially changed, in an effort to provide a more balanced and readable account of the Department's work during the year. We hope that this type of report will better meet the needs of members of the general public interested in a comprehensive summary of departmental operations, rather than in extensive details of unrelated activities.

The Department will be pleased to provide on request further information of the type included in earlier Annual Reports. Other regular departmental publications, like the monthly Oil and Gas statements, the biennial Wildlife Research Progress Reports, and the bi-monthly "north", contain extensive material about areas of work where there is evidence of considerable public interest.

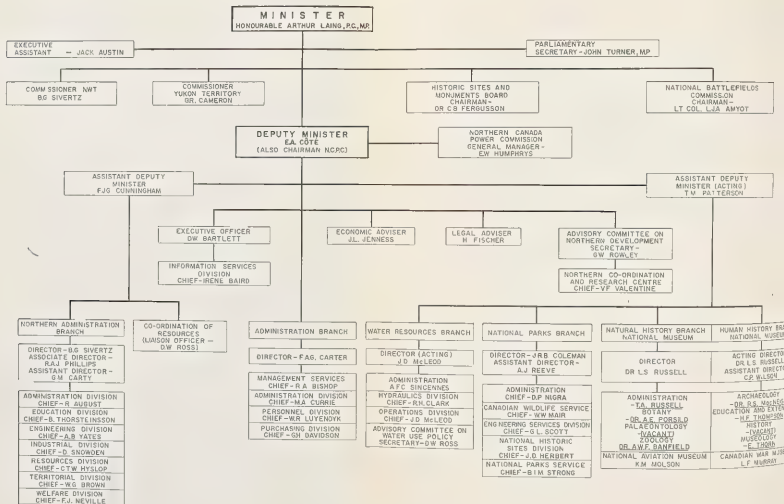
The progress of the Department during the year under review reflects the leadership of my predecessor, Mr. R. G. Robertson, who served as Deputy Minister and Commissioner of the Northwest Territories for ten years ending in June, 1963. In transmitting this report, I would like formally to acknowledge Mr. Robertson's outstanding contribution to the Department over this very significant decade.

Respectfully submitted,

E. A. CÔTÉ,
Deputy Minister.

DEPARTMENT OF NORTHERN AFFAIRS AND NATIONAL RESOURCES

ORGANIZATION CHART



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Inserted at the back of this report is a map showing the centres of departmental activity. An organization chart (as of October 31, 1963) immediately precedes this page.



Eskimo youngsters coming back to school at Inuvik at the end of the summer vacation. Their parents live in scattered hunting camps throughout the Arctic; the children spend the school year in two large hostels that accommodate 250 children each.

The Department in the North

During the fiscal year 1962-63, activities of the Department of Northern Affairs and National Resources increased.

The year began with sales of oil and gas exploration permits to a value of \$250,000 covering more than one million acres of sub-Arctic and Arctic Canada. The oil industry sent about 25 geological parties to investigate potential oil and gas formations in the Mackenzie and Richardson Mountains on the mainland; in the Islands, 22 parties, double that of the previous year, worked throughout the summer.

The first well drilled in the Arctic Islands did not strike oil but it did prove that drilling could be done in the high Arctic during the winter, and it provided useful information about the geological sub-surface in that area. Prospecting for minerals was undertaken by numerous companies and individuals resulting in the discovery of a huge iron deposit in the northern part of Baffin Island. Another important resource find in the Snake River area of the Yukon also involved a large iron-bearing formation.

Perhaps the most exciting discovery, however, was a large deposit of sand, saturated with thick oil, which was found at Melville Island. These discoveries, and an ever-growing realization that the non-renewable resources of the north will have an important role in the economy of the region and the country, were given dramatic publicity by the first resources conference in the north, which was held in Whitehorse during March, 1963.

The Department was also active in scientific exploration: the Northern Co-ordination and Research Centre sponsored 12 studies in the field of social anthropology, one study of air-photo interpretation as an aid to resource development, and a statistical analysis of fur and game resources in the Mackenzie. Planning for the Scientific Research Station at Inuvik continued. A program of grants for northern research

institutes and northern scientific expeditions followed a recommendation of the Advisory Committee on Northern Development; grants totalling \$60 thousand were made to seven institutes and to two expeditions.

During the year, some \$5.8 million was spent in both territories for development roads to provide access to mines and other favourable areas. Reconstruction work went ahead on the Whitehorse to Keno road, and the reconstruction program on the Stewart Crossing-Dawson City road was completed. Work on the new road from Watson Lake to Ross River continued; the Flat Creek to Eagle Plain road (the Dempster Highway) was completed to Chapman Lake. The reconstruction of portions of the Mackenzie and Hay River highways was brought near completion. Another \$32 thousand was spent in both territories for airstrips.

Another major step was the completion of plans for a new low-cost three-bedroom house; 15 were purchased by the Department for the Eskimo co-operative at Frobisher Bay. A contract was awarded for the first phase of the new development at Frobisher Bay, which includes the rehabilitation of camp buildings, warehousing, site clearance, the construction of roads, utilidors, and water treatment plant. The Department arranged for the purchase and resale to Eskimos of 125 low-cost houses.

In education, an important step forward was the approval, at the 1963 session of the Northwest Territories Council, of a plan for financial assistance to students who qualify for university training. Tuition fees, transportation, and books will be paid for in full, and the student will be able to borrow money to cover the cost of room and board at the university. These loans may be forgiven if the student returns to the Northwest Territories after graduation.

Enrolment of children in schools in the Northwest Territories and in Arctic Quebec increased by about 500 over the 1961-62 school year; the increase was accommodated mainly through the completion of additional classrooms and special rooms at eleven settlements.

In the schools of the Mackenzie district, an experimental social studies program was introduced; another is being developed for the Arctic. A health and physical education curriculum guide has been introduced. Other curriculum guides and bulletins on the teaching of art and English as a second language were also produced.

The vocational education program included both junior and senior high school students for the first time. Courses for adults continued. Commercial and clerical training led to the employment of 39 northern graduates; courses in carpentry, fire-fighting, commercial guiding, furniture repair, auto mechanics, sewing, hair dressing, and outboard motor repair were also given.

In twenty-nine centres, formal adult education classes had over 1000 persons register in 100 groups; informal adult education courses were reported by 38 school principals.

The fur-garment manufacturing course at Aklavik was completed and the project became a co-operative enterprise; a similar course was started at Tuktoyaktuk.

The first exhibition of Eskimo etchings, the work of Cape Dorset artists, was offered to the public with a new collection of prints from Povungnituk and Cape Dorset. Fresh experimentation in the arts began with Departmental help in Baker Lake and Rankin Inlet. An exhibit entitled "Canadian Sculptors of the Arctic" at the National Gallery of Canada met with wide praise.

All Eskimos in the Northwest Territories, Arctic Quebec, and Churchill, Manitoba are provided with welfare services by the Department. These services are family services, rehabilitation, corrections and community welfare. They are designed to foster self sufficiency and promote self reliance in a people undergoing a period of social and economic change.

Rehabilitation centres at Frobisher Bay and Inuvik provided programs for 170 persons. Other aspects of northern welfare included provision for the construction of 30 welfare houses for Eskimos in each of the Mackenzie and Arctic districts. A new children's receiving home was opened at Yellowknife early in 1963. The Department also accepted the responsibility for the repatriation of Eskimo hospital patients to their home communities in the north; agents were appointed in Edmonton, Winnipeg, Moose Factory, Roberval and Montreal to aid with transport and the purchase of necessary clothing and to accompany patients leaving southern hospitals.

The Department is assisting territorial governments in the Yukon and the Northwest Territories in setting up a corrections program. Funds are being provided to construct medium security institutions at

both Whitehorse and Yellowknife. Expert professional and technical advice is available to both territorial governments.

A singular event was the publication of an original story for children with illustrations, entitled "The Little Arctic Tern and the Big Polar Bear", written by a 23-year old Eskimo girl, Miss Leah Illauq. It was the first publication in the new spelling which uses Roman letters and it evoked wide interest. Work progressed on the Eskimo Book of Knowledge or Q-Book. The name of the book in Eskimo is "Qaujivaallirutissat", and it means "that which will let you know more." Its purpose is to provide ready reference on such matters as health, welfare and care of equipment. It will be published in syllabics, new Roman spelling and English, and will be distributed without charge to Eskimos in the north.

The economy of the north was strengthened by new ventures and expanded activity in the industrial sphere. For example, 15 hundred seals were taken during an organized seal fishery at Port Burwell; the Arctic char fishery there produced over 12 thousand pounds of fish; and an experimental cod fishery yielded 8 thousand pounds of frozen fillets for sale in northern and southern Canada. Other char fisheries also had a good year. Among the other industrial projects were boat building, sawmilling, and an experimental whale fishery at the Tha-Anne River, which produced 30 thousands pounds of processed food for human consumption and a similar amount of dog food. The new fish reduction plant in the Mackenzie Delta produced about 10 thousand pounds of dog food and oil.

Three area economic surveys recommended measures to improve and diversify local economies through food processing, char fishing, arts and crafts development, seal fishing, and the application of modern methods of trapping and resource harvesting.

One of the biggest events in the northern year was the first conference of all Arctic co-operatives, held in March at Frobisher Bay. Observers from provincial and national co-operative organizations attended the week-long conference, and it received wide attention in the press. Co-operatives continued to help improve the social and economic welfare of the Eskimos, and four more were established during the year to bring the total to 18. Their volume of business exceeded \$750 thousand, of which more than one-third went to Eskimos in direct payment for produce, handicrafts, wages and in refunds.

Finally, as a reflection of the growing interest in the north by people from southern Canada and the United States, the number of tourists almost doubled—from 13 hundred to 22 hundred. This resulted in large part from the opening of the Mackenzie Highway System to Yellowknife, and the increased popularity of sports fishing.

Significant changes are predicted in Canada's north.

In the 1961 census, the population of the Northwest Territories was just short of 23,000. This represents an increase of 43 per cent over the 1951 figure of 16,004. The rate of increase in the Territories was greater than in any province, and was exceeded only by the Yukon.

Over the 10-year period family size has increased from 3.9 to 4.3; families are substantially larger in the Territories than they are across Canada. Improved housing and medical services should reduce substantially the rate of infant mortality in areas where it is high, and it seems likely that the trend to larger families will continue.

The implications of these figures, for education in the near future and employment in the more distant future, are obvious.

Many of the northern schools are bulging. Temporary classrooms or extensions to existing permanent facilities are urgently needed. Resources will be taxed to the limit to provide students with the education they must have if they are to achieve satisfying and productive lives in a modern northern society.



Mountain rescue is an important aspect of the work of wardens in the mountain National Parks. The men take strenuous training to develop into proficient skiers and mountain climbers, capable of carrying out rescue work in any terrain. Here, two wardens descend an overhang of Mount Cirrus using a special cable.

The Department and Resources

Three separate branches of the Department are concerned with a wide variety of resources uses: Northern Administration, National Parks, and Water Resources. The activities of the Northern Administration Branch in the resource field are discussed in this annual report under the subject "The Department in the North."

The objectives of the National Parks Branch are to preserve and develop the seventeen existing national parks for the enjoyment of the public, to expand by establishing new parks or by reserving sites for new parks, and to co-operate with provincial governments and other agencies in co-ordinating the development of new outdoor recreation resources.

Use of the National Parks, which in past years has been increasing by leaps and bounds, rose to a new peak in 1962. Visitor attendance reached a total of nearly 7,500,000, an increase of almost 2,000,000 over that for the previous year.

The demand for camping facilities showed a substantial increase with campground registrations up by some 20 per cent. To meet the demand, work continued steadily on the development of new campgrounds and the extension and improvement of existing ones.

Two new campgrounds, Redstreak at Kootenay National Park and Wapiti at Jasper National Park opened in July, and offered camp sites arranged in a dispersed system of circles with a small area of trees and shrubbery between each one for greater privacy. A section of a new campground at Point Wolfe in Fundy National Park was also opened to the public. Construction was continued on the Broad Cove campground in Cape Breton Highlands Park, a new complex at Wasagaming in Riding Mountain National Park and Kicking Horse campground in Yoho National Park.

Winter tourist areas and ski centres such as Banff, Jasper, and Mount Revelstoke National Parks were well patronized; a new ski area on the eastern slopes of Riding Mountain National Park attracted visitors during the late winter season.

The opening of the Rogers Pass Section of the Trans-Canada Highway through Glacier and Mount Revelstoke National Parks in British Columbia brought record crowds to Mount Revelstoke, Glacier, Yoho, and Banff National Parks, all located along the route of the new Trans-Canada Highway.

A number of highways within the parks were under construction and reconstruction continued on the Banff-Windermere, Jasper-Edmonton and Banff-Jasper Highways. The Mount Revelstoke road was improved and paving and resurfacing were done on the Emerald Lake Road into Yoho National Park. Improvements were made to the Point Wolfe road in Fundy National Park.

During the year considerable work was done on potential new national parks to meet present demands and future needs for recreational areas. The Department, in co-operation with the Government of Nova Scotia, carried out a joint survey of potential sites for a second national park in Nova Scotia. As a result, it was agreed that a national park will be established in the Kejimikujik area in the interior of the province between Liverpool and Digby.

The establishment of national parks in the Yukon Territory and the Northwest Territories was also considered. In the late summer of 1962 a field party from the National Parks Branch and a recreation consultant reviewed potential sites for national parks in the Yukon and two areas in the Mackenzie District, the valley of the South Nahanni River, and the east arm of Great Slave Lake.

A survey of the park potential of the Bruce Peninsula of Ontario was also carried out in co-operation with the Government of Ontario.

During the year proposals for new zoning concepts which will provide for the better preservation of wilderness areas in Jasper, Banff, Yoho, and Kootenay National Parks were put forward and adopted by the Department. As a result, a significant part of each of these parks will remain wilderness, while other areas will be more highly developed for visitor use appropriate to a national Park. Travel will be

encouraged in the wilderness areas through trail systems and primitive shelters.

As all three levels of government in Canada are involved in the more effective use of outdoor recreation resources, this Department's objective is to co-ordinate its activities with other jurisdictions so that national parks may play an appropriate role in a nation-wide outdoor recreation plan. The relationship of the national parks to provincial and municipal recreation areas and the co-ordination of park and recreation systems at all levels of government is therefore essential.

The first Federal-Provincial Parks Conference in late 1962 was an important beginning in the co-ordination of efforts to develop outdoor recreation resources for the greatest advantage of all Canadians. The conference will meet on a regular basis every second year to consider broad matters affecting parks policy and planning; at annual meetings, park administrators will discuss more technical matters. It was agreed to co-operate in planning and developing outdoor recreation resources by the exchange of information, research data, and experience among the numerous planning and operating agencies.

As a first step in setting up an overall inventory of parks and recreation space in Canada, the conference recommended preparation of a suitable classification system. This was intended to clarify present park terminology, to indicate areas of responsibility and to make it easier to secure and develop park lands at all levels of government. A report and proposed nationwide park classification system was prepared by the Planning Division of the National Parks Branch for review at the conference in November, 1963.

Canadian Wildlife Service

To meet the need for closer co-operation among provincial and federal wildlife agencies and to take a more direct approach to land management as the primary tool of wildlife management, the Canadian Wildlife Service established a Western Regional office at Edmonton. Studies of land management in areas of important waterfowl habitat were also undertaken by the Canadian Wildlife Service.

Among the Service's other activities were continuing surveys of waterfowl breeding conditions and populations (carried out in co-operation with the provinces and the United States Bureau of Sport Fisheries and Wildlife); surveys of waterfowl harvest by mail questionnaire in Eastern Canada; studies of factors affecting the reproductive success of waterfowl at various points in Canada; determination of migration routes and mortality of migratory birds by banding; studies of the reproductive physiology and behaviour of barren-ground caribou and the condition of their range; studies of the populations and distribution of fur-bearing mammals in the Mackenzie Valley; assessment of the status of big game animals and their ranges in National Parks and studies on the biology of certain species; and development of management programs for sport fish in National Parks.

The review of the incidence of diseases and parasites in wildlife was continued. Particular attention was given to the occurrence of anthrax in the bison of Wood Buffalo National Park. Specimens of meat and bone from the various members of the deer family were collected from a number of points throughout Canada as an aspect of the study of radioactive fallout.

Considerable research was also done on specific problems such as the factors affecting permanency and productivity of prairie potholes, the efficacy of techniques of waterfowl habitat improvement, the causes of population fluctuations in Arctic foxes, the biology of polar bears, and the life histories of Wilson's snipe and bufflehead.

Plans are currently underway for research on the control of birds creating a hazard at airports, the taking of easements on prairie wetlands, and the development of techniques for multiple land use in community pastures.

Water Resources Branch

For more than 50 years the Water Resources Branch has collected, compiled, and published basic data with respect to streamflow and water level on a systematic national basis.

With the increase in population and the development of new areas remote from the main population centres, competition has built up for the available water resources and additional data is required.

To meet this growing demand for information, the coast-to-coast gauging system network of the Branch was increased by over 100 stations during 1962 to reach a total of almost 1750. The majority of these additional stations were established to obtain data for specific water resources developments now in the proposed or planning stages; others were established to provide data on the water resources of the eastern Keewatin District, the lower Mackenzie drainage basin and the Peel-Porcupine-Rat Rivers area of the Yukon Territory.

One of the most interesting programs is the flood warning service operated by the Branch in a number of flood sensitive areas. During the year this service operated on the Columbia, Fraser, Saskatchewan, and Saint John Rivers and in a number of basins in Ontario. Water level data, studies of river conditions, current meteorological data and the results of snow surveys were all used in the preparation of day-to-day estimates of anticipated river stages in flood prone reaches, and the information was passed on to the responsible agencies.

An important factor in the development of any water resource is the tendency of the particular stream to transport material such as silt and sand. In order to systematize the collection of data on sediment transport, the Water Resources Branch initiated a sediment survey program in 1961 to complement its hydrometric program. During the past year nine sediment survey stations were active in Manitoba and Saskatchewan. Sediment survey samples are collected and sent for processing to a new sediment laboratory at Saskatoon. The results are available for use in geomorphological studies in connection with projects proposed or under construction in the Saskatchewan and Red River basins.

The Branch provides technical advice to government agencies, including the Department of External Affairs and to the Canadian Section of the International Joint Commission. During the year, in addition to the continuing studies on such international streams as the Columbia, Milk, St. Mary, Souris, Red, St. Lawrence, St. Croix and Saint John Rivers, a major new study was initiated on the Champlain waterway.

Work progressed both on the studies of the Fraser River Board due for completion in 1964, and on the Ottawa River Engineering

Board. By federal-provincial agreement, studies were initiated on the Nelson River in Manitoba where a firm power potential of 4,000,000 kilowatts is indicated. A study of the problems associated with long distance EHV transmission also undertaken by a consulting company on behalf of the Federal-Provincial Working Committee on Long Distance Transmission. This study will assess the potential of long distance EHV power interconnections from British Columbia to the Maritime provinces.

The Canada Conservation Assistance Act provides a statutory basis for financial assistance to the provinces in constructing major water use or control projects. Under the provisions of this Act, \$1,100,000 was paid in 1962 to the Province of Ontario for the construction of projects in the Upper Thames River Basin and in the Metro Toronto Region. These projects have an estimated capital cost of \$34,000,000; the Federal Government is expected to contribute a total of \$12,500,000.

In addition to projects covered by the Canada Conservation Assistance Act, the Federal Government agreed in 1962 to contribute toward the cost of construction of the Greater Winnipeg Floodway. Of the estimated cost of \$63,212,000, the Federal Government will contribute close to 60 per cent of the total. Under the terms of this agreement, Canada contributed almost \$2,000,000 during the fiscal year.

One of the most significant achievements in resources policy during 1962 was the establishment of the Canadian Council of Resource Ministers. The group grew out of the Resources for Tomorrow Conference; it is composed of one resource minister from each of the provinces and the federal Minister of Northern Affairs and National Resources.

The Council, located in Montreal, has a permanent Secretariat headed by a Secretary-General. It will provide a unique forum for the discussion of any federal-provincial or inter-provincial resource problems related to agriculture and land use, fisheries, forestry, recreation, water, wildlife, air and water pollution, urban growth, or resource development generally.

The Federal Government also maintains liaison with the Canadian Council of Resource Minister's Secretariat through a member of this

Department, who acts as the Federal Government representative on the Technical Advisory Committee of the Council.

It remains the objective of the Department to continue to play its full part in all these areas of worthwhile resource use and promotion. Through such channels as the Canadian Council of Resource Ministers, the Department will also strive towards achieving greater co-ordination of resource development policies between all the agencies concerned with this complex and important area of responsibility.



The partial restoration of the 18th-century Fortress of Louisbourg as a National Historic Park is the most extensive restoration program ever undertaken in this country. The King's Bastion and the Chateau St-Louis will be completely rebuilt. In the background, beyond the ruins, is the Louisbourg Museum.

Interpretation of Nature and History

Broad imaginative planning is giving new zest to the natural and human history programs of the Department.

Visitors to the National Museum during the year soon responded to the lively atmosphere. In Eskimo Hall, soft Eskimo voices and music set the mood for viewing life-like scenes; a family dressed in furs relaxes inside the igloo on a winter night; a summer camp group outside a skin tent watches the men set off to spear caribou; an umiak in full sail carries a crew of six and a snarling dog. The final dissolving diorama, by Museum archaeologists, shows a group of Thule Eskimos building a stone, bone, and sod hut which gradually fades into a scene of present day archaeologists excavating the same hut.

Eskimo Hall was in preparation the full year and was formally opened by the Minister of Northern Affairs and National Resources who cut a dog-whip lash instead of the traditional ribbon.

In December a colourful winter travel exhibition, featuring horse sleighs, buffalo robes, pioneer skis, and toboggans opened in the temporary exhibition hall on the fourth floor. A spinning and weaving exhibit followed; the spinning wheels whirled and weavers at looms guided shuttle cocks through an intricate routine to turn out brightly patterned cloth. The items for both exhibits—from horse snow shoes to a home-made pioneer suit of wool—were selected from the growing collection of historical articles that are being acquired for the new Museum of Canadian History. The same collection—most of it still in storage—provided the furniture, fine china and rugs to re-create the home-like 1862 parlour displayed by the museum at the Central Canada Exhibition.

On the second floor of the Museum, dioramas, at various stages of completion, marked the progress of Mammal Hall. School children on tour enjoyed advance peeks—through plywood boarding—at the shaggy

musk-ox and bison, the mountain sheep, moose and caribou, while zoologists and botanists advised on, and gifted artists recreated, the details of their natural habitats. The fibre glass diorama shells are in sections for easy unbolting and moving to the new Museum building that is scheduled to open its doors in 1967.

An experimental "Indian Week" program in July enrolled some eighty children who divided into tribes, built wigwams, war-whooped on the Museum grounds, and sat in circles to hear stories and legends. The program (about as lively as human educators could stand) supplemented regular sessions for children on Indian life, dinosaurs and museum history. Highlight of the winter evening lecture series was an on-stage presentation of the laser light; a capacity crowd of students and scientists thronged the lecture platform after the formal presentation to examine the equipment and ask further questions.

In offices above the display areas, museum scientists prepared and edited scientific papers, planned to attend conferences, and exchanged information and specimens with their counterparts in museums and universities around the world. Investigations of a rare deposit of fossil fishes at Wapiti Lake in British Columbia and the study of the Dorset culture in the Arctic are projects that are being watched with lively interest by scientists and laymen alike.

Museum publications now in progress that are certain to be widely read include the volumes of native folk songs, "Mammals of Canada" (with a recently completed section listing fifteen species of native mice), and "Birds of Canada", an impressive manuscript with sixty-nine colour plates.

Until recent years the interpretation of natural history has been, almost exclusively, the work of museums. Now nature interpretation is moving outside into the bright open spaces of the National Parks. The step is logical; parks can be enjoyed more fully when their natural assets are recognized and appreciated.

In nine National Parks seasonal naturalists, trained in the Department's naturalists' school, gave campfire talks and walked with visitors along the trails. On occasion, in Fundy National Park, the naturalist has spoken to crowds of eight hundred visitors at a campfire nature talk; seaside field trips have attracted from two to three hundred people.

At Point Pelee National Park an "all-out" interpretation program is underway. The unique area offers a wide range of subjects for study. It is on the direct migration route of many species of birds; in the spring, waves of exhausted birds settle in the shrubs along the beaches. Its marshlands have more turtles than any other single area in Canada; white-footed mice, moles, butterflies and marsh plants are found in profusion on the triangular land mass.

During the winter months work began on the Marsh Boardwalk Nature Trail (the only one of its kind in Canada) that will extend thirty-two hundred feet into the fresh-water marsh. Visitors will be able to walk out into the marsh and watch the intricate pattern of life. Plans for side platforms and a twelve-foot tower have been approved and a nature centre near the entrance to the Park will serve to direct visitors to areas of special interest. Plants and shrubs are labelled; animals and small reptiles that cannot be expected to stay put (even to accommodate visitors) will have markers on their favourite logs, rocks or beaches.

The interpretative program will tell how Point Pelee developed over a period of ten thousand years, from a shifting sand spit to an area rich in plant and animal life. The understanding of irreplaceable nature features in park areas across Canada will make more park visitors aware of the need to preserve them.

In human history the interpretation programs of the National Historic Sites Division are giving increasing emphasis to "living museums."

Historic Dawson City, scene of the world-famous Klondike Gold Rush in 1896 was one of the chief centres of attention for the year. Of its original buildings, none seemed more evocative of the Gold Rush spirit than the old Palace Grand Theatre. Where, but in a booming gold town, would one find an opera house and legitimate theatre within 250 miles of the Arctic Circle?

On the advice of the Historic Sites and Monuments Board of Canada (a group of fourteen historians chosen from all the the provinces), the famed Palace Grand was dismantled and rebuilt, board by board. In the process, gold dust was sifted from between the planks of the old three-storey building; early letters, found between the floor

boards, were of special interest to historians working on the project. The restored theatre was inaugurated as a National Historic Site on July 1st; on July 2nd, its curtains rolled back on "Foxy", a lively musical comedy adaptation of the play "Volpone".

The same week, the S. S. KENO, one of the few surviving Yukon sternwheelers, now beached on a river lot at Dawson, and Discovery Claim on Bonanza Creek, the original claim that launched the spectacular gold rush in 1896, were declared National Historic Sites. The original townsite of Dawson City was also declared a National Historic Site on August 17th—Discovery Day—commemorating the day that the original claim was staked.

At Kitchener, Ontario, "Woodside", the boyhood home of the late Rt. Hon. W. L. Mackenzie King, and now a National Historic Park, was refurbished, papered with period wallpaper and opened for public inspection in May. In the years between 1886 and 1893, John King, father of Mackenzie King, leased "Woodside" and lived there with his family of two sons and two daughters. The historic residence has been refurbished for a family of six in the "high Victorian" style with a wealth of tables, chairs, statuary, knick-knacks, and pictures—an estimated 7,000 items in all. "Woodside" is probably the first house in Canada to be restored in the style of the late Victorian period.

At historic Fort Wellington, overlooking the St. Lawrence River at Prescott, the officers' quarters building has been completely restored and refurbished. This is the first phase of the plan to restore the entire fort, now a National Historic Park, to its condition in the 1840's.

The building was stripped back inside and out to the basic structure of squared cedar logs, and the original long horizontal windows were brought back. Plaster, made in the old way with a binding of animal hair, was smoothed on the interior walls; the restored logs were covered on the outside with clapboard, matched to the type used in the original building.

Each of the three rooms in the quarters—bedroom, kitchen and combined office and dining room—were furnished with appropriate cast-iron stoves of the period (the officers had found the building uncomfortably cold). A long black-painted wood box extends the length of a kitchen wall; a fold-out bench filled with straw, was accommodation

for the non-commissioned officer who served as batman and cook. The kitchen furniture and utensils—shining tin tea-kettle, wooden bowls and pewter jugs—are of Canadian origin, but the massive canopied bed that occupies a good part of the bedroom is Regency style in glowing mahogany. The Sheraton dining-room table and the dining-room chairs are also of English make. A desk in the combination dining-room and office holds all the paraphernalia needed by early writers, including a jar of powdered fish scales to blot the ink on official reports and letters.

At “Maillou House”, 17 St. Louis Street, Quebec City, two military offices have been furnished in the style of the 1820’s—the Army Bill Office, and the Military Chest Office (with two pairs of iron money-vault doors). The “salle de Jean Maillou” has been furnished as it may have been in the 1740’s when it was occupied by Jean Maillou, a Quebec City architect.

In France, early seventeenth century furniture is being collected to furnish the kitchen, bakery and forge of one of the first buildings in Canada, the “Habitation” of Samuel de Champlain at Port Royal on the Annapolis Basin in Nova Scotia.

On the east coast the massive program for a partial restoration of the 18th-century Fortress of Louisbourg on Cape Breton Island is underway. The responsibility for the first stage of the work is with historians and research officers who must decide the countless details of construction, materials and location. Research in original documents, maps and plans (stored mainly in libraries and archives in Paris) will be supplemented by a general study of the architecture, armament, and dress of the period.

The all-weather excavation of the foundations of the stately Château St. Louis was begun; archaeologists on the site collected and studied artifacts that revealed any structural details of Louisbourg or the lives of its inhabitants.

In the final stage, Louisbourg will be a “living museum”. The King’s Bastion, the strongest feature of the fortifications, will be reconstructed; the Château St. Louis, containing the chapel, officers’ quarters and barracks will be furnished down to the last authentic whale oil lamp. A Louisbourg “garrison” in white and blue uniforms, and a besieging force may well demonstrate how French and British soldiers drilled in the middle of the 18th century.

Several private buildings in the town will be reconstructed, as well as wharf and harbour installations that were used for trade and commerce.

With the approach of the Centennial Year, historical interpretation programs are gaining impetus.

At Louisbourg the objective is a substantial showing of progress on the massive restoration project.

In Ottawa the first, and major section of the new National Museum will open its doors in 1967. Dioramas now on display will be moved into the new building and a selection of historic Canadian planes and war relics from the National War Museum will go on display. A Hawker Sea Fury Aircraft used by the Royal Canadian Naval Air Squadron 803 was added to the collection during the year.

At the National Aviation Museum a JN 4 Canuck was thoroughly reconditioned by the Aviation Museum staff, and a DH 60 Cirrus Moth, restored to its original condition by long-service employees of the original manufacturer, was acquired. The National Aviation Museum will become the first section of the planned Museum of Science and Technology.

In the National Historic Parks as many attendants as possible will be in costume to give added interest to restorations. The long graceful skirts and tucked shirtwaists of the late Victorian period will be worn at "Woodside"; fur traders in costumes of the 1830's will move in and out of the Lower Fort Garry Fur Building.

With the ultimate aim of compiling a list of all the historically and architecturally important buildings in Canada—and forming a true picture of their national significance, the National Historic Sites Division is making test surveys in three historically rich areas—Quebec City, Halifax, and Niagara-on-the-Lake.

To determine historically important sites, archaeological research is being done in areas such as Fort St. Joseph, on St. Joseph's Island near Sault Ste. Marie. Some buildings and sites may be maintained and operated by provincial or local authorities, although ownership remains with the Department; others are acquired and operated directly through the Department.

During the fiscal year the Department was encouraged—and in some locations almost embarrassed—by the increased number of visi-

tors. Attendance at the National Museums grew to nearly 500,000, an increase of 13,000 over one year.

The historic parks were host to 1,260,000 people, and many parks nature trails were crowded.

There is every indication that this growing public interest will continue; a steady growth of facilities in future years will be needed to meet it.

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Appendix A

NORTHERN EDUCATION—STAFF AND ENROLMENT

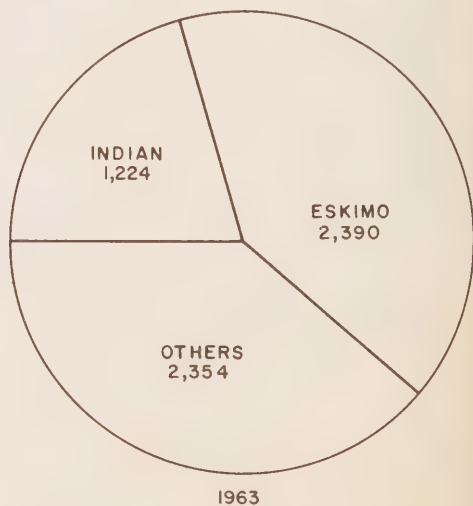
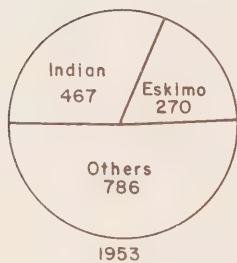
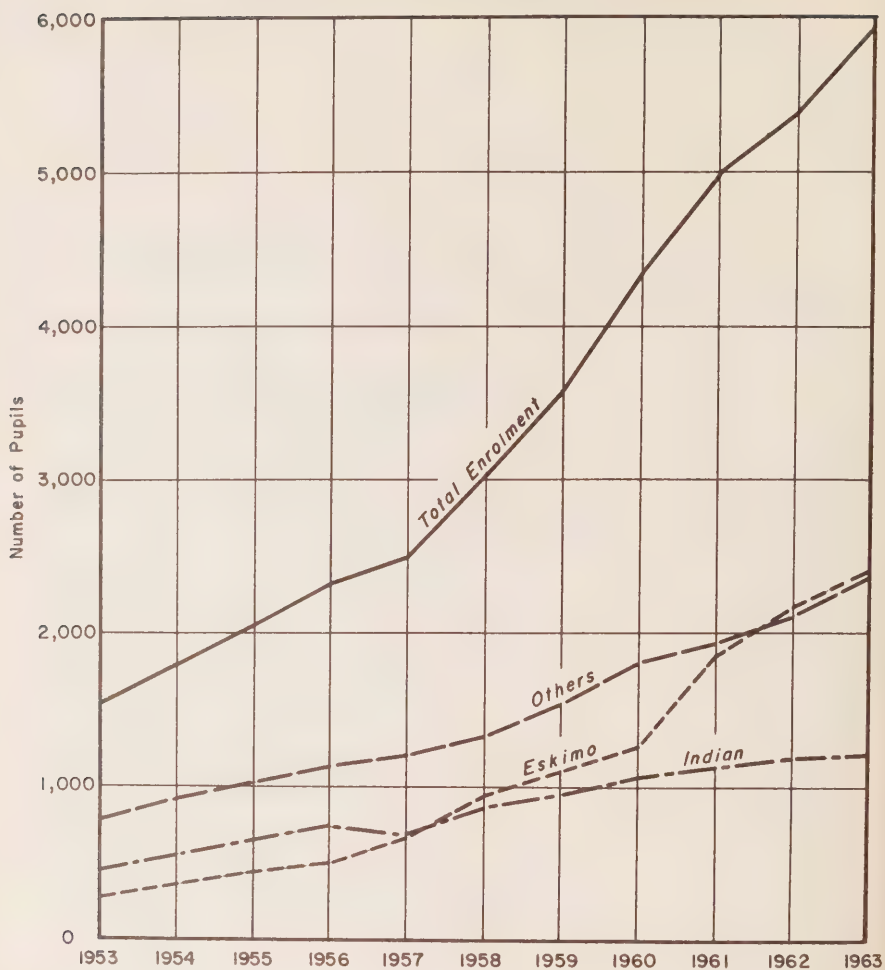
1. Mackenzie Education District

School	No. Rooms**	Teaching Staff	Enrolment			
			Eskimo	Indian	Others	Total
Aklavik.....	6	7	59	27	54	140
Arctic Red River.....	1	1	—	6	4	10
Cambridge Bay.....	2	2	33	—	8	41
Coppermine.....	2	2	48	—	5	53
*Discovery.....	1	1	—	—	12	12
Fort Franklin.....	3	3	—	59	2	61
Fort Good Hope.....	2	1	—	23	11	34
Fort Liard.....	1	1	—	15	6	21
Fort McPherson.....	7	8	1	126	42	169
Fort Norman.....	2	2	—	23	26	49
Fort Providence.....	2	2	—	37	17	54
Fort Resolution.....	6	6	—	26	115	141
Fort Simpson.....	14	18	3	208	79	290
Fort Smith.....	25	31	—	213	421	634
Gjoa Haven.....	1	1	31	—	—	31
Hay River (Federal).....	9	12	—	9	198	207
Inuvik.....	31	36	364	136	298	798
Jean Marie River.....	1	1	—	15	—	15
Lac La Martre.....	1	1	—	27	—	27
Norman Wells.....	1	1	—	—	29	29
Old Crow, Y.T.....	2	2	—	37	11	48
Pelly Bay.....	1	1	17	—	—	17
Rae.....	4	4	—	83	14	97
Reindeer Station.....	1	1	14	—	—	14
Snowdrift.....	1	1	—	29	3	32
Spence Bay.....	1	1	37	—	—	37
Tuktoyaktuk.....	4	4	78	1	7	86
Tungsten.....	2	2	—	—	18	18
Sir John Franklin.....	5	18	21	39	116	176
Hay River Separate.....	7	8	—	30	146	176
Yellowknife Public.....	18	21	—	—	406	406
Yellowknife Separate.....	10	12	—	19	197	216
	174	212	706	1,188	2,245	4,139

*Company School

**Figures are for regular classrooms only.

SCHOOL ENROLMENT GROWTH



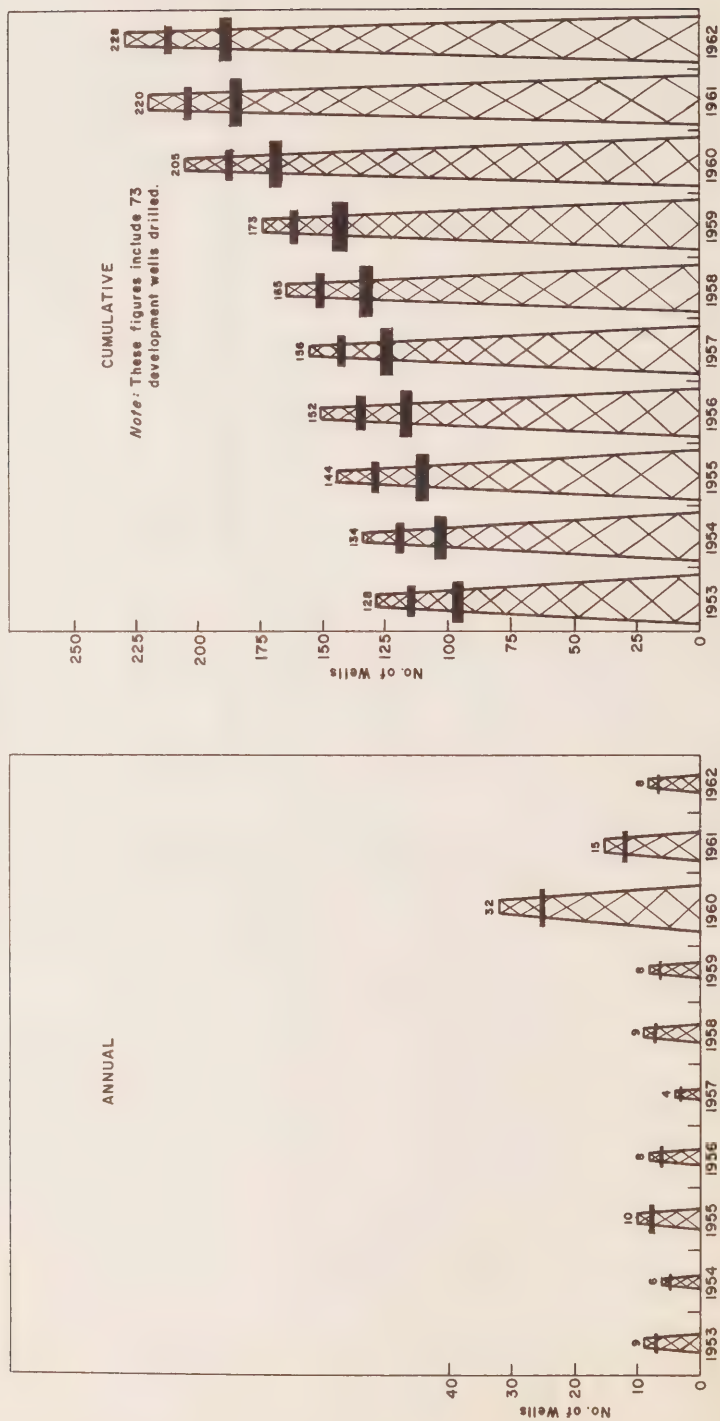
Appendix A—*Concluded*

2. Arctic District Office

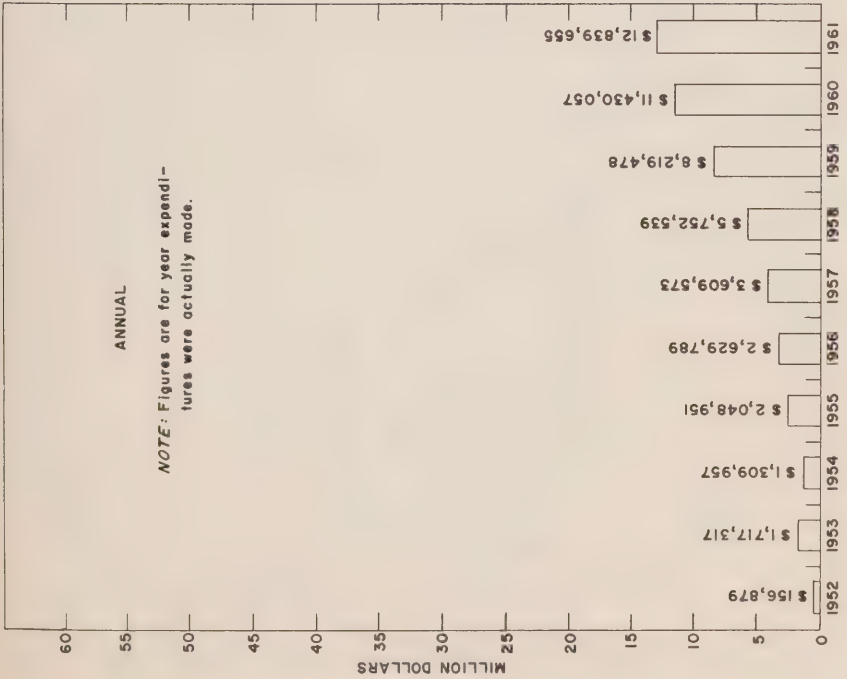
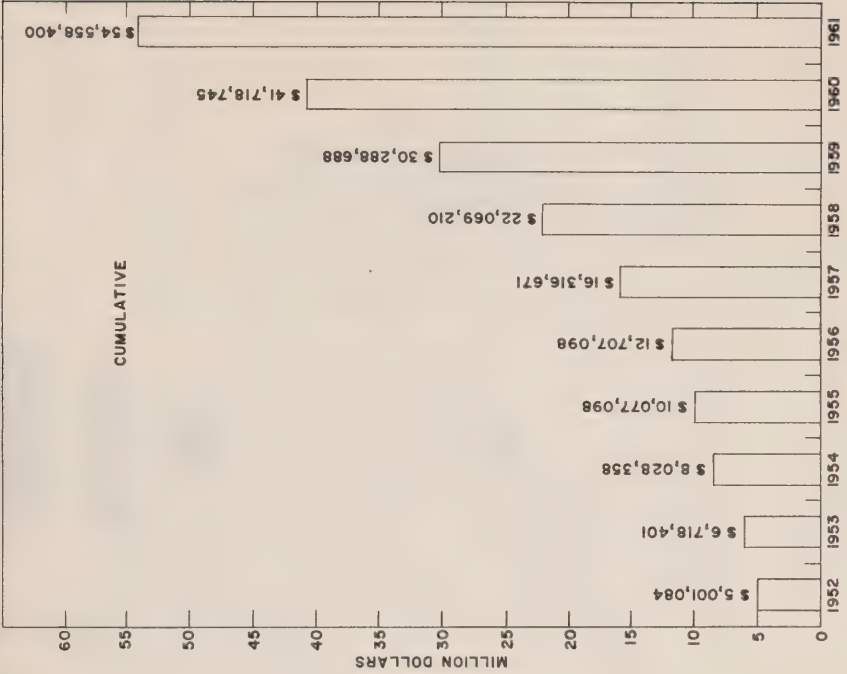
School	No. Rooms**	Teaching Staff	Enrolment			
			Eskimo	Indian	Others	Total
Arctic Bay.....	1	1	13	—	—	13
Baker Lake.....	5	5	105	—	1	106
Belcher Islands.....	1	1	18	—	—	18
Broughton Island.....	2	2	47	—	—	47
Cape Dorset.....	3	3	71	—	—	71
Chesterfield Inlet.....	4	4	110	—	7	117
Clyde River.....	1	1	42	—	—	42
Coral Harbour.....	3	3	57	—	—	57
Eskimo Point.....	3	3	60	—	—	60
Fort Chimo, P.Q.....	6	6	113	1	22	136
Frobisher Bay.....	13	16	200	—	44	244
Great Whale River, P.Q.....	6	8	114	35	5	154
Grise Fiord.....	1	1	23	—	2	25
Igloolik.....	3	3	59	—	3	62
Notre-Dame-d'Ivugivic, P.Q.....	1	1	24	—	—	24
Notre-Dame-de-Koartac, P.Q.....	1	1	17	—	—	17
Padloping.....	1	1	16	—	—	16
Pangnirtung.....	2	2	41	—	6	47
Payne Bay, P.Q.....	2	2	41	—	—	41
Pond Inlet.....	1	1	47	—	—	47
Port Harrison, P.Q.....	2	2	47	—	1	48
Port-Nouveau-Quebec.....	1	1	29	—	1	30
Povungtuk, P.Q.....	5	5	106	—	4	110
Rankin Inlet.....	6	6	125	—	2	127
Resolute Bay.....	1	1	25	—	—	25
Sugluk, P.Q.....	2	2	58	—	2	60
Wakeham Bay, P.Q.....	2	2	35	—	1	36
Whale Cove.....	2	2	41	—	8	49
	81	86	1,684	36	109	1,829
GRAND TOTALS.....	255	298	2,390	1,224	2,354	5,968

**Figures are for regular classrooms only.

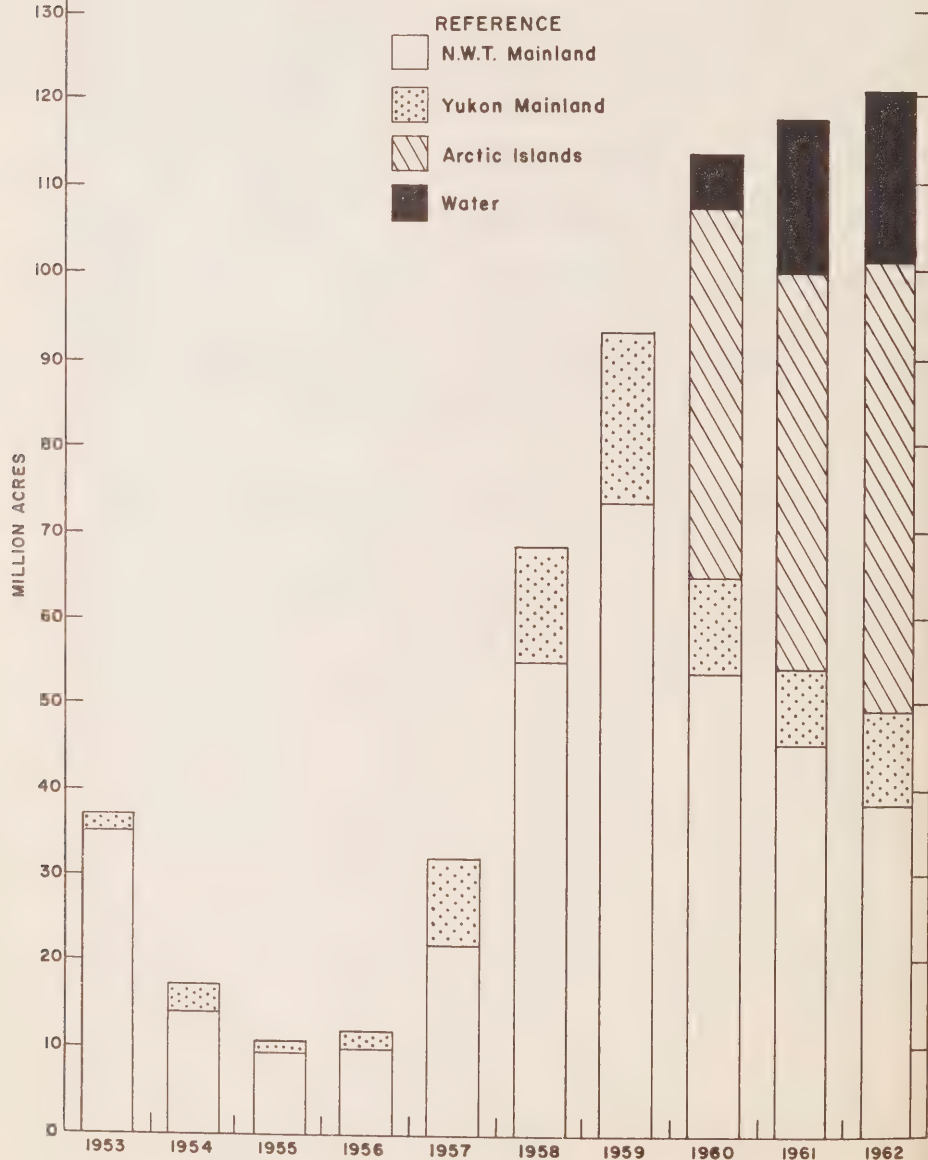
TOTAL WELLS DRILLED YUKON & NORTHWEST TERRITORIES



OIL AND GAS EXPLORATORY EXPENDITURES



CANADA LANDS Oil and Gas Permits Active 1953-1962



WATER RESOURCES BRANCH

LEGEND

RIVER SYSTEMS INVOLVED IN MAJOR INVESTIGATION AND STUDY ASSIGNMENTS DURING FISCAL YEAR 1962-1963

△ FEDERAL

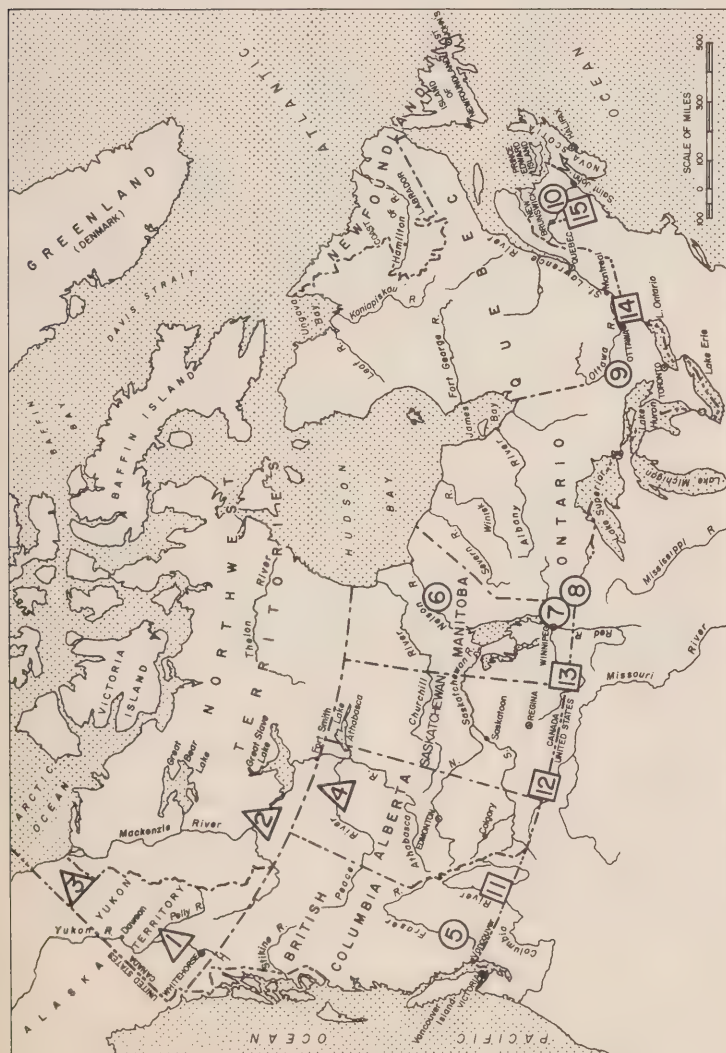
1. YUKON
2. MACKENZIE
3. PORCUPINE-PEEL-RAT
4. PEACE

○ FEDERAL-PROVINCIAL

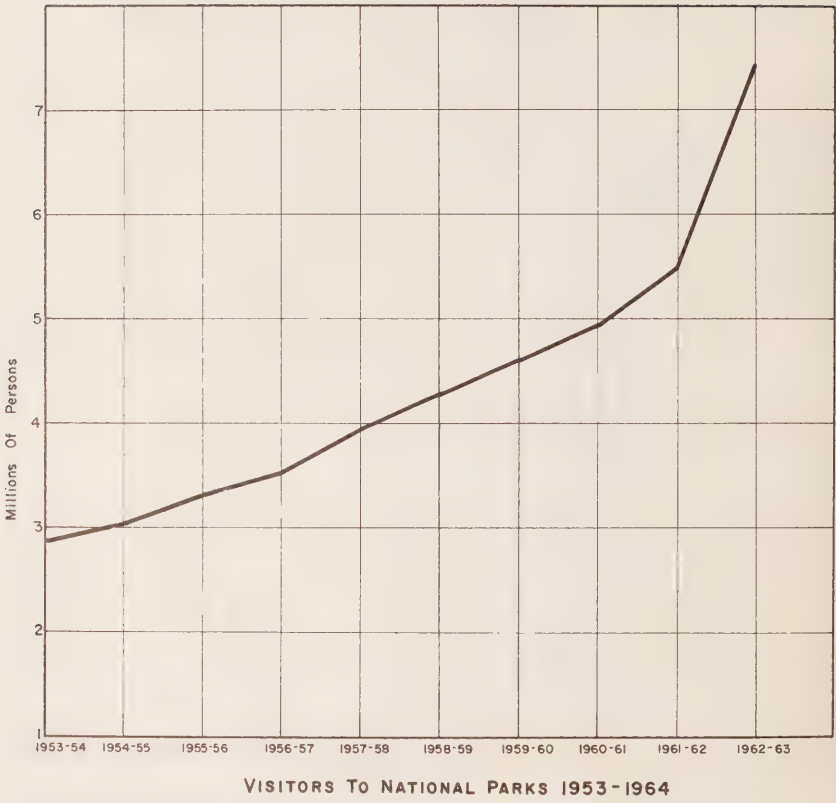
5. FRASER
6. NELSON
7. GREATER WINNIPEG FLOODWAY
8. LAKE OF THE WOODS-WINNIPEG
9. OTTAWA
10. SAINT JOHN

□ INTERNATIONAL

11. COLUMBIA
12. ST. MARY-MILK
13. SOURIS-RED-PEMBINA
14. GREAT LAKES-ST. LAWRENCE
15. ST. CROIX



CANADA
MAJOR INVESTIGATIONS AND STUDIES — 1962-1963



APPENDIX C

The National Parks

LOCATION, AREA AND COMPARATIVE STATEMENT OF VISITORS
FOR THE PERIOD APRIL 1, 1962 TO MARCH 31, 1963

National Parks	Province	Area	1962-63	1961-62	Increase or Decrease
		<i>sq. mi.</i>			
Banff.....	Alta.	2,564	1,374,576	1,069,623	+ 304,953
Cape Breton Highlands.....	N.S.	367	451,911	371,686	+ 80,225
Elk Island.....	Alta.	75	176,040	183,263	- 7,223
Fundy.....	N.B.	79.5	302,340	280,006	+ 22,334
Georgian Bay Islands.....	Ont.	5.4	19,126	14,230	+ 4,896
Glacier.....	B.C.	521	345,961	10,213	+ 335,748
Jasper.....	Alta.	4,200	392,987	346,493	+ 46,494
Kootenay.....	B.C.	543	541,485	470,562	+ 70,923
Mt. Revelstoke.....	B.C.	100	428,572	64,901	+ 363,671
Point Pelee.....	Ont.	6	667,554	485,637	+ 181,917
Prince Albert.....	Sask.	1,496	137,484	140,650	- 3,166
Prince Edward Island.....	P.E.I.	7	1,009,021	775,583	+ 233,438
Riding Mountain.....	Man.	1,148	654,251	642,931	+ 11,320
St. Lawrence Islands.....	Ont.	.4	75,239	86,150	- 10,911
Terra Nova.....	Nfld.	153	29,915	29,710	+ 205
Waterton Lakes.....	Alta.	203	444,752	420,865	+ 23,887
Yoho.....	B.C.	507	375,189	99,160	+ 276,029
Sub-total.....		11,975.3	7,426,403	5,491,663	+1,934,740

N.B.—No attendance records available for Wood Buffalo National Park, Alberta—N.W.T. (17,300 sq. mi.).

National historic parks and Major historic sites	Province	Area	1962-63	1961-62	Increase or Decrease
		<i>acres</i>			
*Alexander Graham Bell.....	N.S.	14	79,659	73,682	+ 5,971
*Batoche Rectory.....	Sask.	1.25	15,350	15,641	- 297
Fort Amherst.....	P.E.I.	222	1,764	1,452	+ 312
Fort Anne.....	N.S.	31	83,103	69,646	+ 13,457
Fort Battleford.....	Sask.	37	30,895	27,511	+ 3,384
Fort Beausejour.....	N.B.	81	51,454	43,543	+ 7,911
Fort Chambly.....	P.Q.	2.5	71,053	62,533	+ 8,520
Fort Langley.....	B.C.	9	98,560	104,961	- 6,401
Fort Lennox.....	P.Q.	210	24,959	32,890	- 7,931
Fortress of Louisbourg.....	N.S.	399.5	32,347	30,036	+ 2,311
Fort Malden.....	Ont.	8	42,254	37,334	+ 4,920
Fort Rodd Hill.....	B.C.	44.4	42,533	no record	+ 42,533
Fort Wellington.....	Ont.	8.5	46,666	38,685	+ 7,981
Grand Pré.....	N.S.	14	47,871	47,392	+ 479
Halifax Citadel.....	N.S.	37	243,609	229,677	+ 13,932
Lower Fort Garry.....	Man.	13	59,544	50,234	+ 9,310
Port Royal Habitation.....	N.S.	20.5	31,579	20,922	+ 10,657
Prince of Wales Fort.....	Man.	50	362	414	- 52
Signal Hill.....	Nfld.	243.37	239,554	137,600	+ 101,954
*Sir Wilfrid Laurier's Birthplace	P.Q.	1.5	8,186	7,668	+ 518
Woodside.....	Ont.	11	10,738	7,797	+ 2,941
Sub-Total.....		1,458.52	1,262,040	1,039,618	+ 222,422
Grand Total.....			8,688,443	6,531,281	+2,157,162

*Major Historic Sites.



APPENDIX D

MUSEUM FIELD PARTIES

On Contract

1. C. Borden, archaeology
2. R. Kidd, archaeology
3. D. Mitchell, archaeology
4. T. Fiske, archaeology
5. K. Dawson, archaeology
6. J. Pendergast, archaeology
7. C. Kennedy, archaeology
8. R. Channen, archaeology
9. F. Taylor, archaeology
10. G. M. Rousselière, archaeology
11. R. T. Hustich, botany
12. Dr. Edward S. Rogers, ethnology

13. Dr. Fred Voget, ethnology
14. Bill Holm, ethnology
15. Kenneth Kidd, ethnology
16. Prof. W. F. Mackey, linguistics
17. Dr. Paul M. Postal, linguistics
18. Dr. Karl V. Teeter, linguistics
19. Dr. R. W. Dunning, ethnology
 - (a) Fraser Canyon, (b) Hope, (c) Lytton, (d) Lillooet
20. Dr. Catharine McClellan, ethnology
21. Robert Hollier, linguistics
22. Prof. Marc-Adéland Tremblay, ethnology
23. Father John T. McGee, ethnology
24. Howard Hoffman, ethnology
25. Miss Brenda Leake, linguistics
26. Mrs. Edgar S. Efrat, linguistics
27. Mrs. Alika Webber, ethnology
28. L. Seboek, ethnology
29. Miss Lorna Kwong, museology
30. Kenneth Peacock, folk music
 - (a) Doukhobor, (b) Mennonite, (c) Hungarian
31. Mrs. T. Koshets, folk songs
32. Mrs. P. P. Trebuss, folk songs (Hungarian)
33. Henry Enns, folk songs (Mennonite)
34. Robert Klymasz, folk songs (Slavic)
35. Eli A. Popoff, folk songs (Doukhobor)
36. Mrs. Gertrude Kurath, folk music and dancing
37. Mademoiselle Maguy Andral, ethnomusicology
38. Dr. Helen Creighton, folklore
39. Monsieur R. L. Séguin, ethnology
40. Mrs. Edith Fowke, folk songs
41. Miss Renée Landry, folk songs
42. J. P. Wilson, diorama artist and D. Chandler, collector (sage grouse diorama)
43. J. P. Wilson, diorama artist (southern birds at Point Pelee)
44. J. P. Wilson, diorama artist (hawk migration)
45. J. P. Wilson, diorama artist (alpine birds)

Museum Staff

- A. J. V. Wright, archaeology
- B. G. McDonald, archaeology
- C. W. E. Taylor, archaeology
- D. Dr. H. Scoggan, botany
- E. W. K. W. Baldwin, botany
- F. Eugene Arima, ethnology
- G. Dr. David Damas, ethnology
- H. Dr. Carmen Roy, folklore
- I. J. Crosby, and P. Haldorsen, artists (southern birds diorama)
- J. J. Crosby, artist (hawk migration diorama)
- K. E. Thorn, museology (alpine birds diorama)
- L. E. Thorn, museology (cougar diorama)
- M. S. D. MacDonald, ethnology of blue grouse
- N. Dr. E. L. Bousfield, invertebrate zoology
- O. Dr. Arthur H. Clarke, Jr., malacology
- P. D. E. McAllister, ichthyology
- Q. Francis R. Cook, herpetology
- R. Phillip M. Youngman, mammalogy

APPENDIX E

CLASSIFIED POSITION STRENGTH AS AT APRIL 1, 1963

1. Department of Northern Affairs and National Resources

Branch	Ottawa	Provinces	Yukon	N.W.T.	Total
Departmental Administration	208	—	—	3	211
National Parks	179	570	1	4	754
Northern Administration	358	10	45	598	1011
Water Resources	85	158	4	5	252
National Museum	105	—	—	—	105
TOTAL	935	738	50	610	2333

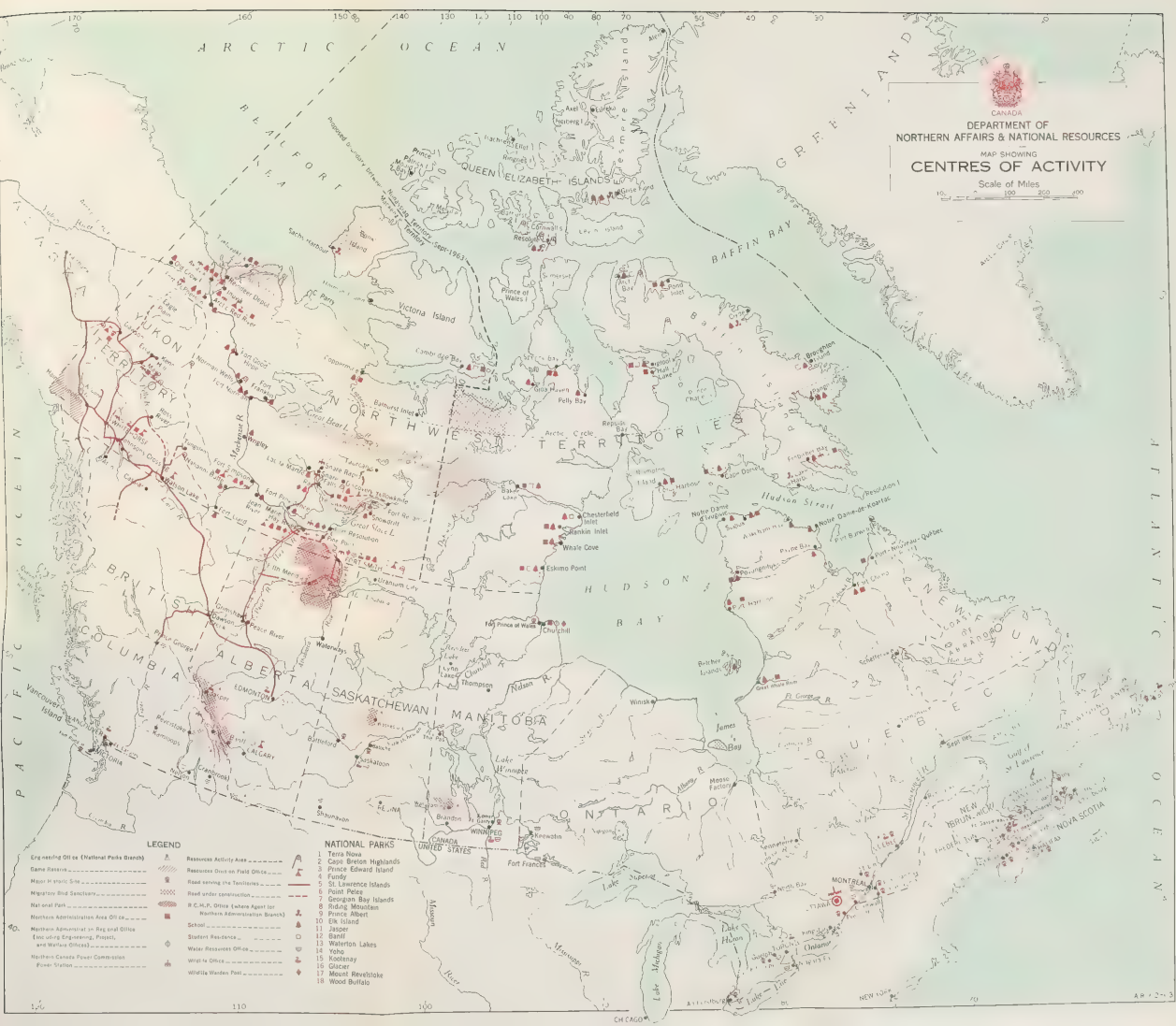
2. Summary of Revenues and Expenditures 1962-63

	Revenues	Expenditures
ADMINISTRATION SERVICES	\$ 2,251	\$ 1,040,265
Contributions to the Provinces for Campground and Picnic Area Developments		1,271,667
Roads to Resources	35,268	10,365,803
		<hr/>
NORTHERN CO-ORDINATION AND RESEARCH CENTRE		215,247
		<hr/>
NATIONAL PARKS BRANCH		
Branch Administration		303,516
National Parks and Historic Sites	2,368,447	24,670,464
Grant to Jack Miner Migratory Bird Foundation		5,000
Grant in aid of the development of the Inter- national Peace Garden in Manitoba		15,000
National Battlefields Commission		233,200
Canadian Wildlife Service	5,263	932,390
	<hr/>	<hr/>
	2,373,710	26,159,570
		<hr/>
WATER RESOURCES BRANCH		
Administration and Construction	143,516	2,228,750
Fraser River—federal expenditures in connection with investigations carried out by the Fraser River Board		166,200
Nelson River Study—Expenditure in connection with investigations to be carried out in ac- cordance with an agreement entered into between Canada and Manitoba		50,000
Contributions to the Provinces towards the con- struction of dams and other works to assist in the conservation and control of water re- sources in accordance with agreements entered into between Canada and the Provinces		3,097,376
	<hr/>	<hr/>
	143,516	5,542,326
		<hr/>
NORTHERN ADMINISTRATION BRANCH		
Branch Administration	7,077	1,157,480
(Public Lands)	289,400	
Education	248,228	7,763,318
Welfare and Industrial	482,575	3,685,175
Yukon Territory	526,723	7,050,381
Northwest Territories	1,861,773	15,085,482
Inuvik Townsite—Write-off of loans made, to the Northern Canada Power Commission, for the construction and installation of central heat- ing, water, sewage and fire alarm systems at Inuvik, N.W.T.		7,004,000
	<hr/>	<hr/>
	3,415,776	41,745,836
		<hr/>
NATIONAL MUSEUM OF CANADA	2,257	1,186,487
	<hr/>	<hr/>
OTHERS	804	36,464
	<hr/>	<hr/>
TOTALS FOR DEPARTMENT	5,973,582	87,563,665
	<hr/>	<hr/>

DIRECTORY TO ADDITIONAL INFORMATION

General Information	Information Services Division Department of Northern Affairs and National Resources, 85 Sparks Street, Ottawa.
Monthly oil and gas report	Resources Division, Northern Administration Branch, Department of Northern Affairs and National Resources, 150 Kent Street, Ottawa.
*north (a bi-monthly magazine)	The Editor, north, Northern Administration Branch, Department of Northern Affairs and National Resources, 150 Kent Street, Ottawa.
National Museum	National Museum of Canada, McLeod and Metcalfe Streets, Ottawa, Ontario.
National Parks	National Parks Branch, Department of Northern Affairs and National Resources, 150 Wellington, Street, Ottawa.
Canadian Wildlife	Canadian Wildlife Service, Department of Northern Affairs and National Resources, 150 Wellington Street, Ottawa.
Water Resources	Water Resources Branch, Department of Northern Affairs and National Resources, 150 Wellington, Street, Ottawa.

*available from the Queen's Printer, Ottawa.



Government
Publications



ANNUAL REPORT

Department of Northern Affairs and National Resources



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FISCAL YEAR 1963-1964



*Department of
Northern Affairs and
National Resources*

ANNUAL REPORT

FISCAL YEAR 1963-1964

ROGER DUHAMEL, F.R.S.C.
Queen's Printer and Controller of Stationery
Ottawa, Canada, 1965

THE COVER PHOTO: stone cut engraving "Caribou and Birds" by Pitseolak, outstanding Eskimo artist from Cape Dorset. "Caribou and Birds" is one of the three engravings by Pitseolak that were purchased by the National Gallery from the 1963 collection of Eskimo prints.



974118

*The Honourable Arthur Laing, P.C., M.P., B.S.A.,
Minister of Northern Affairs and
National Resources.*

SIR:

I have the honour to submit the Eleventh Annual Report of the Department of Northern Affairs and National Resources, for the fiscal year ending March 31, 1964.

The new format used for the Annual Report last year was very well received and, as a result, it is being continued this year. It is well to recall that the Department will be pleased to provide, on request, additional information as was included in Annual Reports of the earlier type. The Department's other regular publications such as the monthly Oil and Gas Statements, the Wildlife Research Progress Reports, and the magazine "north" will continue to provide extensive factual information on the Department's activities.

The second decade of the existence of the Department has begun, and with it a host of new challenges and new tasks to be accomplished. As a result of this dynamic field of endeavour during the last year, modern techniques of management and administration were reviewed in the light of their possible implementation in the Department's operation. This review has produced interesting recommendations which will be evaluated during the months to come, and which are bound to achieve greater efficiency throughout the Department as we engage deeper into the 60's.

Respectfully submitted,

E. A. CÔTÉ,
Deputy Minister

The North



At Fort Chimo in Arctic Quebec, Mrs. Jeannie Snowball, designer of Ookpik, turns out hand-made seal skin owls to fill a back-log of orders for her whimsical creation.
(Photo by NFB)

The North

The settlements that pin-point the Northwest Territories are gradually being developed by the addition of small prefabricated houses and co-operative buildings and the expansion of existing schools.

At Grise Fiord in the far northern Queen Elizabeth Islands, twenty-five children occupy the desks in the school room during the school day; in the evening, adult classes move in. The women and older girls learn how to use canned and prepared food, and the hunters and trappers study basic English and arithmetic.

In many of the small settlements throughout the Arctic, the pattern is repeated, for the school is the centre of community activity including the Saturday night dance.

A contrast in size to the one-room schools are the well-established secondary schools at Yellowknife and Inuvik in the Mackenzie. Students from every part of the north fly in to school once a year, live in modern pupil residences, take advanced courses (either academic or vocational) and return home in summer. During the year a hundred-bed wing was added to Akaitcho Hall at Yellowknife, doubling its capacity.

The schools have a variety of practical courses, especially designed for northern students. New units of study are being planned by northern teachers and the curriculum staff to preserve the culture and history of arctic settlements—as well as to introduce studies of the outside world.

During the year 25 northern students qualified for grants (totalling \$15,080.95) from the territorial government to attend universities in the south; loans for board and lodging were made to eight other students.

Under the Apprentices Training Ordinance, territorial grants are available to residents over 16 who wish to become skilled tradesmen.

Trades range from auto mechanics to barbering; apprentices are paid for on-the-job work. Training costs, travelling, and living expenses for the theoretical parts of the course are paid by the territorial government.

Attendance in schools administered by Northern Affairs has reached the 6,200 mark; of this number 1,496 students live in residence. During the year twelve new eight-pupil residences were built; some of the 96 youngsters who move into them will be attending school regularly for the first time in their lives. Some of the vacated military facilities at Churchill will be used as a school and pupil residence beginning September 1964. About 100 youngsters will begin vocational education with academic up-grading courses, and 60 will take academic courses.

The opportunity to attend school regularly is the most significant change in the lives of Eskimo youngsters. For the parents, change is closely linked with the development of the Eskimo co-operatives. More than five hundred Eskimos—one in about every five families—belong to a co-operative. During the year, three new co-operatives were formed: a credit union was established in Yellowknife; at Fort Franklin, the first Indian Co-operative Association was formed; the third new co-operative was incorporated at Igloolik, N.W.T. The additions bring the total number of co-operatives to nineteen, with a total business turn-over of close to \$1 million per annum.

Highlight of the handicrafts program was a whimsical sealskin owl with round moosehide eyes. "Ookpik" from Fort Chimo drew an immediate response from crowds at a major trade show in Philadelphia. The copyright on the "Ookpik" design was secured by the Department; designer Jeannie Snowball and the Fort Chimo Co-operative will receive long-term benefits as the rights to reproduce Ookpik in various forms were sold to commercial firms.

The people of Baker Lake earned a record \$25,000 from the production of handicrafts and carvings during the year under a new program of arts and crafts development in Keewatin District.

On Victoria Island and the mainland facing it, an economic survey of natural resources was completed by the Industrial Division. In other areas where programs to harvest resources are well established, northern foods (frozen and fresh Arctic char, pickled herring, Beluga whale and seal) were produced in experimental quantities, for export as well as for local consumption. Seal and whale products were canned and put on

sale in Eskimo co-operative stores; processed herring and 'Delta' dog food (fish and whale) were prepared for a testing program.

Eskimo sea-hunters and fishermen were quick to take advantage of the new Eskimo Small Boat Assistance Plan to buy boats with a wider hunting and fishing range. The program allows a 40% grant towards the total cost of a boat, provided the fishermen, individually or in groups, can make a down payment of at least 20% of the total cost. The balance would be covered by a loan from the Eskimo Loan Fund, but in many cases Eskimo buyers did not require the additional credit.

The urgent need for permanent housing is being met under the Eskimo Low Cost Housing Program, developed and administered by the federal government. In the year under review, 148 small pre-fabricated houses were shipped to the Arctic for Eskimo buyers; a further 104 homes were provided for widows and the disabled.

Larger houses are available to residents of the Territories though the Northwest Territories Low Cost Housing Ordinance. The housing program allows a grant of \$1,000, plus a first mortgage loan up to \$6,000. In 1963, 37 applications were approved for a total of \$245,000 in grants and loans.

To help develop a good working relationship between the Eskimos and Northern Affairs staff in the north, a course in the Eskimo language was developed by the Welfare Division. The course, prepared on a scientific basis by a trained linguist, may be made available to other agencies with interests in the north.

The Welfare Division also produced a distinctive Eskimo publication—the Q-Book, written in Eskimo syllabics, Roman orthography, and English side by side on each page. This is a sort of Eskimo book of knowledge with informative articles, well-illustrated by a variety of artists, covering topics that range from basic health laws to baking, the drawing up of wills and the care of hunting equipment. The Q-Book has been distributed free to Eskimos throughout the north and is on sale at the Queen's Printer in Ottawa.

At the Frobisher Bay Eskimo Rehabilitation Centre, emphasis shifted from commercial operations (staffed by patients physically unable to return to a life on the land) to individual treatment for rehabilitants.

A group of gifted sculptors has developed at the Centre. Their work was shown in an exhibit, *Canadian Sculptors of the Arctic*, held at the National Gallery of Canada in the summer of 1963. The collection received high praise from art critics and the visitors who flocked to see

it; the carvings have been retained by the Department as a permanent exhibit.

The development of natural and acquired skills has been closely related to the development of northern resources. Vocational training courses are being given with the emphasis on heavy duty equipment, mining processes, carpentry and general construction work.

When North Rankin Nickel Mine closed down in 1962 some of the Eskimo miners who worked there found jobs in Yellowknife. This novel venture, in which the Department was catalyst, was made possible by the co-operation of several of the mining companies in the Northwest Territories.

The government has established a new assay office in Yellowknife which not only provides an assay service for prospectors in the Northwest Territories, but also offers courses in assaying to students at the Sir John Franklin School. To spur mineral exploration, Northern Affairs reviewed the Prospectors' Assistance Program with representatives of industry and prospectors. As a result, a complete revision of the Program has been agreed to and the Department looks forward to a very successful year.

Other services to primary industry in the north include safety inspections on mining and oil and gas operations, and dust and ventilation surveys at all the mines in both Territories.

In the Northwest Territories, mineral prospecting ranged far and wide but concentrated in areas such as Contwoyto Lake, Coronation Gulf, along the Redstone River, and in the Mackenzie Mountains. On the northern tip of Baffin Island a promising iron deposit has been discovered and is being explored.

In the Yukon the number of recorded mineral claims increased; value of mineral production reached a total of over \$14.5 million for the year. Prospecting and exploration were done in several parts of the Yukon; of the year's work, the Whitehorse copper belt, the asbestos properties near Dawson, the lode gold west of Carmacks, and a silver-lead-zinc deposit in the Mayo area, deserve a special mention. The most newsworthy event was the discovery of a huge deposit of iron ore on the Snake River in the northeast part of the Yukon. The discovery was made in 1962; during 1963, geological exploration was done around the whole area and the companies involved made thorough studies of the deposit, and transportation and shipping problems. It will prob-

ably take years to develop a deposit of this size but discoveries like the Snake River iron reaffirm the faith of those who believe that the future of the north lies in its mineral resources.

The other important facet of mineral exploration in the north is the search for oil and gas. The tempo of this exploration has increased steadily over the last decade and the geological map of the subsurface of the Arctic is being filled in. During 1963 two new wildcat oil wells were drilled in the Arctic Islands and four on the mainland of the Northwest Territories. Twenty-two geological parties ranged over the country—with emphasis on the Arctic Islands. For the first time, Hudson Bay was explored in the search for oil and gas.

During the year three important work-bonus oil and gas permit sales were held by the Department, with good results. The oil companies bidding in these sales undertook to spend an additional \$15 million for exploration in both Territories.

The Oil and Gas Section of the Resources Division administered exploration permits for oil and gas off Canada's coasts. During 1963 there was considerable interest in the possibility of finding oil and gas on both sides of our Continental Shelf, and at the end of the year an all time high of over 42 million acres of land under water off the Maritimes and British Columbia were held under permit.

As the exploration for minerals and oil and gas proceeded in both Territories and the High Arctic, steady progress was made to develop and open the huge mine at Pine Point on the south shore of Great Slave Lake. This large deposit of lead and zinc has been under exploration for many years. Six years ago the Consolidated Mining and Smelting Company of Canada went ahead with definite plans to start a mine and erect a processing mill at the site.

The Canadian National Railway Company is building the Great Slave railway from Grimshaw, Alberta, to the shores of Great Slave Lake at Pine Point, a distance of 432 miles. By 1965 this mine will be in full operation, and will undoubtedly have profound effects on the regional economy.

An immediate result is the construction of roads to link the Hay River highway with Pine Point and Pine Point with Fort Smith. The first 24 miles of road were completed from Hay River during 1963; at the Fort Smith end winter clearing was carried out as a winter works project. The road from Hay River to Fort Smith will be about

161 miles long, and the access road from the Buffalo River turn-off to Pine Point, a distance of 18 miles.

Improved highways and air fields opened the Mackenzie District to an estimated 3,500 visitors who left behind a million vacation dollars during the summer season.

Lodges and fishing camps at Great Bear Lake and Tree River attracted a growing number of anglers with a taste for adventure and Arctic grayling. Fishermen from the United States are discovering Canada's far north and coming back for more.

In the Mackenzie Mountains a survey of sports hunting potential was completed with an eye to opening the area to sports hunters. A large cruise boat operating between Hay River and Tuktoyaktuk is expected to bring the first sightseeing visitors to settlements along the Mackenzie River.

The attraction of breaking new vacation ground in the north may develop a tourist industry that can give a healthy lift to the northern economy.

In these and other ways, the Department endeavoured to work toward solution of the social and economic problems facing the people of the Northwest Territories. High fur prices in some areas were bringing a temporary measure of affluence to some of the people living off the land. Nevertheless, this permitted no slackening of efforts in programs of education, economic development, and provision of minimal housing in order to provide training for employment or for living off the land, to provide means of subsistence, and even to provide basic shelter. The social problems of primitive peoples faced with overwhelming cultural change continued to absorb a considerable amount of attention of welfare, administration, and education officers. Real accomplishments were in evidence as mentioned above, but the job remaining to be done was still very great.

Nature and History



The partial restoration of the Fortress of Louisbourg on Cape Breton Island is the most extensive restoration project ever undertaken in Canada. Archaeologists do on-the-site research to confirm or reject the story revealed by the research of historians in the archives and libraries of France, Britain, Canada and the United States.

Nature and History

A race against time has developed in the management of the National Parks and National Historic Parks.

The preservation of wilderness areas and irreplaceable nature features must be combined with heavy current use. Long range planning and research programs are of increased importance to determine—and protect—fragile or significant areas for the enjoyment of future generations.

During the fiscal year, visitor attendance in the National Parks came close to the 9½ million mark; the increase was 26.9% over the previous year, and every trend points to heavier use of park lands in future years. Lightweight tents, comfortable camping equipment, smooth roads, more leisure time—all combine to make camping in a scenic national park a pleasant and beneficial holiday.

By 1966, the number of visitors to National Parks (excluding National Historic Parks) is expected to be about 12 million.

In the spacious western parks, a preliminary plan has been worked out to establish areas of use. Wilderness zones will be set aside for the few to whom recreation is a hike along solitary mountain trails and rest in primitive overnight shelters. Other visitors—the majority—will prefer to spend their holidays in “semi-wilderness zones” with a view of nature through a tent’s gauze windows and the companionable voices of campers on adjoining sites.

Present developed areas are settled into the natural surroundings; services for campers (electricity, water, stoves, shelters, and possibly an outdoor theatre, and laundromats) are minutes away down the campground road. For the future, Visitor Service Centres are planned along major traffic arteries such as the Trans-Canada Highway and the Banff-Jasper Highway to concentrate the heaviest use of park land in carefully selected areas, which will be provided with essential services—water, sewers and electric power.

The conservation of park lands also depends on the understanding of irreplaceable nature features.

The lofty alpine meadows in the mountain parks will lose their masses of wild flowers if they are walked upon casually by hikers. Glacial kettles or depressions formed over the centuries by melting glacial ice, and other natural phenomena are carefully preserved in the planning of secondary park roads and trails.

In the spacious mountain parks, the new zoning concept will help to protect nature features and preserve wilderness areas. In small eastern parks, the problem is more acute.

During the year, Banff National Park (2,564 square miles with thirteen major development areas in various stages of completion) registered 1,650,257 visitors at the eastern gateway. The comparatively limited park lands of Prince Edward Island National Park were second in popularity; the coastal beaches (with a total area of seven square miles) were enjoyed by 1,019,104 visitors.

In the Prince Edward Island park, emphasis is on preservation as well as increased visitor accommodation and parking space. The beauty of the park lies in the vista of sea and sky, red sandstone cliffs and rolling sand dunes. To preserve the dunes, which are a rare feature of nature, access to the beach must be carefully controlled. Heavy traffic must be directed around them to protect the sand-binding grasses and to prevent the beginning of erosion.

On Rustico Island a new camp area (148 tent sites and a kitchen shelter) was laid out with careful consideration for the colony of blue herons that nest in the tall spruce trees on the island. The spectacular birds, often seen fishing along the sandy beaches are sensitive and easily disturbed by visitors walking beneath the trees. A tall fence was built to warn campers away from the nesting spot.

In the summer of 1967 long-range planners expect to accommodate 1,625,000 visitors at the sea-shore park. Water and an underground electrical system were installed at Brackley Beach, and a copious 500,000-gallon reservoir was built at Dalvay Beach.

In Nova Scotia an area surrounding Kejimikujik Lake about 150 miles south west of Halifax is under study as a valuable addition to the National Parks System.

The proposed tract of land is about 150 miles square and contains three major lakes and many smaller lakes and streams. Preliminary

studies suggest a large family park featuring leisurely canoe trips along the connecting waterways and fishing and swimming in the warm lake waters.

The Department and the Government of Nova Scotia have agreed in principle to the establishment of the park but a considerable amount of detailed work, including surveys, remains to be done before the area can be transferred by the Province to Canada and developed as a National Park for the use of visitors.

Throughout the parks, a record number of visitors (444,831) took part in the guided hikes, campfire talks, and outdoor movie programs prepared by park naturalists.

At Point Pelee National Park the completed boardwalk attracted many visitors to the marsh for the first time. The fresh-water marsh is a comparatively rare nature feature that occupies about three-quarters of the park area. The boardwalk which was opened for use during the year, stretches 3,200 feet into the marsh. Visitors who had come only for a swim or picnic found themselves enjoying a close-up view of marsh life. Attendance at Point Pelee increased by 102,000 over the year.

Recreation facilities—bowling greens, golf courses, tennis courts, outdoor bathing establishments and, in the winter, ski centres were widely patronized. The T-bar lift on Agassiz Hill in Riding Mountain National Park was completed, opening a major new ski centre for residents of Manitoba.

In an important step to meet the demands and problems of park administration, three field regions were established during the year. The Western Region comprises that part of Canada west of the Ontario-Manitoba border; the Central Region comprises Ontario and Quebec. The Atlantic Region covers the Atlantic provinces. Regional directors have been appointed and during 1964, staff will be engaged.

The growing need for outdoor recreation space and facilities has resulted in increased co-operation between federal, provincial and regional parks officials. The Federal-Provincial Parks Conference met in Ottawa for the first time in 1962, reconvened in 1963, and will reconvene every second year; annual meetings of parks administrators are held to examine management techniques and to exchange information.

In the National Historic Parks, emphasis is on research work to determine sites of national significance. The archaeological program of the Parks Branch is the largest of its kind in Canada; training programs are being established to give student archaeologists on-the-job training.

Plans were approved for the first summer field school for students to be located on the site of Ile-Aux-Noix in the Richelieu River near St. Paul, P.Q. The site has great historic potential. Champlain was believed to have visited the island in 1609; it later served the French as a defence position against Iroquois raids on the settlements of the Eastern townships and Montreal. Indian relics and artifacts left by French and British occupation have been found and more than seventy buildings were believed to have existed on the island. Fort Lennox, a stone fortress that occupies a quarter of the Island, was built by the British during the War of 1812.

A party of archaeological students will also work on investigations at Fort St. Joseph on St. Joseph's Island near Sault Ste. Marie. In the summer of 1963, archaeologists from the University of Toronto Anthropology Department studied the remains of the stone buildings and located walls, gates, one bastion and part of another. The old bakery of the fort was found and partially uncovered, and another building—which may be the powder magazine—was excavated.

The historic fort—the most westerly British fort in North America—was built in 1796 and served for years as a trading post for the Indians. In the war of 1812 it was the base for the military expedition that captured Michilimackinac, securing the north country for the British. The fort was destroyed by American troops in 1814 and never rebuilt.

The development of Fort Amherst National Park is planned along somewhat different lines than is usual for National Historic Parks. The park—comprising 222 acres of land—was deeded to the nation in 1959 by Prince Edward Island. The earthworks of an 18th century fort are located within the park, near the site of the old French town, Port La Joie. The remains of the fort and settlement are scant, and it is planned to develop them through historical research and archaeological investigation.

Another area of the extensive park will be used as a picnic and swimming area; a third project will take advantage of good farm land to raise native plants for use in the eastern National Parks and Historic Parks system.

Archaeological investigations were also carried out at Fort Latour, the early 17th century fur trading post near Saint John, N.B. The complex site has yielded aboriginal remains (including unusual "red paint" burials, with burnt human bones and stone implements deeply stained

with red ochre), but scant information has been found on the original structure of the Fort itself; its complete character is known to no one today.

Years of research in Canadian archives on the Signal Hill fortifications at St. John's, Newfoundland have produced little to date in the way of plans that can be applied to the proposed restoration of the original fortification. Research work is being continued in the United Kingdom.

At Louisbourg the massive program to reconstruct a cross-section of the fortifications and buildings of the 18th century French fortress has moved into the rebuilding stage.

The excavation of the main building, the Château St-Louis, is nearly complete; the site has yielded a wealth of objects—candle snuffers, glass bottles, clay pipe stems and every day pottery (some of it mended with rivets).

Stone masons—largely ex-miners trained on the job—have begun work on the escarp wall, facing it with reclaimed stone from the ruins.

Part of Louisbourg will remain in desolation to present a vivid picture of the history of the Fortress. Reconstruction will “fade” into ruins to mark the almost complete destruction of the fortress by British forces in 1758.

To meet the urgent need for historical information, a record number of specialists under contract are engaged in research on projects that range from “Bellevue”, a former home of Sir John A. Macdonald at Kingston, Ontario, to the study of early Ontario furnishings and 19th century pottery in early Quebec and Ontario.

In some cases the assignments are part of the expanding museum program of National Historic Parks. The studies (including one of the furnishings and equipment of the Northwest Mounted Police, 1875-1900) will provide a valuable guide in preparing exhibits.

In December, 1963, a museologist was appointed; records in the fifteen Departmental museums are being brought up to date and new exhibits are planned.

During the year, preliminary work was undertaken to compile a national inventory of Canadian architecture.

In three historically rich areas, buildings that are representative of a period of Canadian life or economic development were researched in fascinating detail. As the study progressed, research officers and

architectural students soon became able to distinguish style details of the mouldings, doors and staircases of different decades.

The structural history of the buildings was gradually revealed and noted (in 1850, a Quebec City housewife banished an 1820 mantel-piece from her drawing room to a third-storey bedroom to replace it with another, more in the fashion of the day).

Any alterations to the buildings were recorded and supported with as much detail as possible—the dates, names of owners and contractors, before and after views of the street, newspaper advertisements, and copies of the work contract.

The style of early Canadian builders and craftsmen can now be recognized by research officers, and records are being compiled on the men themselves—their architectural training, educational background, their business partners and personal family lives.

Events of historic interest are noted in the inventory. The house occupied by General Montcalm in 1758-1759 still stands on the ramparts overlooking the St. Charles River. Measured drawings are made of the houses with notes on their present condition and complete details on title.

The architectural inventory, recommended by the Historic Sites and Monuments Board of Canada in 1958, and urged by the Royal Architectural Institute of Canada, will pinpoint buildings of national historic value and enable the government to act on short notice to save historic buildings from damage or possible demolition.

In the fields of human and natural history the Parks Branch is conducting an accelerated program to preserve the riches of the country for the enjoyment of future generations.

Wildlife



A young Eskimo girl makes friends with a baby snow goose on Baffin Island in the Northwest Territories. Young birds are banded to provide information on migration patterns. (Photo by NFB)

Wildlife

For centuries Canada has been known for the wealth and variety of its wildlife. Fur attracted the first traders and encouraged exploration and settlement; fur still provides a livelihood for hunters and trappers in vast regions where other resources are scarce or undeveloped.

Today there are more moose, deer, and certain kinds of grouse in Canada than there were in the days before European settlement. The mountain and forest regions still maintain good stocks of large mammals, including woodland caribou, mountain sheep, wolf, grizzly bear, and wolverine. The vastness of animal habitat in Canada—the stretches of arctic and alpine tundra, the sub-arctic and sub-alpine forests, and the forests of the southern belt—explains in part their survival. But man has made many changes in the face of the land; wildlife habitat has been altered and some species have been hunted more than others. Wildlife management programs have long been necessary to assist nature in protecting rare species and to keep range and animal populations in balance.

The Canadian Wildlife Service carries out research programs in the Yukon and Northwest Territories and the National Parks. The Service administers the Migratory Birds Convention Act (legislation to protect the large bird populations that shuttle seasonally across the national boundaries of North American countries), provides co-ordination and advice in the administration of the Game Export Act in the provinces, and works in close association with provincial game departments.

A critical problem being studied in co-operation with other agencies is the effect on wildlife of biocides used for pest control. This problem is of international concern. In the State of New York this year, DDT will no longer be used to control black flies and mosquitoes

in state camp-sites and for state forest-pest control programs. Fishery biologists have discovered that the poison enters the water and is picked up by lake trout through the aquatic food chain. Adult lake trout are not affected, but the fry die when they absorb the fatty—and contaminated—material from the yolk sac, which functions as a food reserve for the period following hatching.

In other countries, deer feeding in areas treated with chemical poisons have been found to accumulate DDT in their fatty tissues. Earthworms may absorb DDT from dead leaves into their tissues; a total of 50 milligrams of DDT, which can be carried by as few as eleven earthworms, will kill a robin. Woodcock also eat DDT-contaminated earthworms, and may accumulate enough DDT to cause woodcock hunters to worry about eating their kill. Wild duck eggs laid in the Northwest Territories and young ducks hatched there were found to contain DDT, picked up by the mother bird, and transmitted to her eggs and offspring.

The first detailed study of the impact of biocides on wildlife was started in Canada early in 1964, when the Canadian Wildlife Service, working with the Fish and Wildlife Branch of the New Brunswick Department of Lands and Mines, began an investigation into the effect on wildlife of spray operations against the spruce budworm in New Brunswick.

The development of persistent populations of budworms brought about a need for another method of control.

On an experimental basis, 200,000 acres were sprayed in 1964 with a systemic organo-phosphate, which is only 1/250 as toxic to fish as is DDT, because it hydrolyzes rapidly in water and leaves no residue.

The Service investigated the hazard this chemical presents to wildlife. For the study, ruffed grouse were supplied by the provincial government; the Department of Health and Welfare made a bio-chemical assessment of cholinesterase levels; and the Department of Forestry provided information on the amount of spray reaching the ground. The effects of the organo-phosphates on exposed humans were measured by studies on insecticide formulators, spray-plane pilots, and forestry and wildlife workers.

This year for the first time the Service hopes to have facilities available to determine the biocide residue in wildlife tissues. By 1965, it plans to begin monitoring wildlife species for pesticide residues on a nation-wide scale.

The bird hazard to aircraft at airports is a second major study. The biological aspects of the problem are being directed by the Canadian Wildlife Service; the co-ordinating agency for the Canadian work is the National Research Council of Canada.

The best long-term solution to the problem is to make airports as unattractive as possible to hazardous species of birds, and several hundred thousand dollars will be spent towards this goal.

Garbage dumps that provide plentiful food for scavenging crows and gulls (and these are located near several Canadian airports) will be relocated. Agricultural crops and various native plants that attract birds will be replaced where possible; earthworms that move onto airport runways in considerable numbers after a heavy rain may be controlled by using acid fertilizers or spray.

Another direct technique of bird control is local extermination. Doves at Toronto and Montreal International Airports are trapped using grain as bait; pheasants at Vancouver International Airport have been held in check by allowing shooting under a permit system.

The study of the bird hazard to aircraft will expand to include the tracing of bird movements on radar screens. Major bird migrations will be studied and pilots will be warned of the location of large flights of geese or swans that could cause serious damage to aircraft.

For the first time in September, 1963, farmers in the prairie provinces were paid to maintain a safe breeding place for ducks.

Under the Wetlands Agreements, a pilot project, eleven land owners guaranteed that they would not drain, fill or burn vegetation around the wetlands on their property for twenty years.

The program is expected to expand rapidly to save valuable pothole country for the breeding of waterfowl.

In the Baker Lake area, Northwest Territories, studies were continued on factors influencing the cycles of abundance of the Arctic fox. Many variables—including the size and fertility of the breeding population and the survival of healthy young—influence the success of the winter trapping effort. A summer count of lemmings at Aberdeen Lake is a related project; lemmings make up over 80 per cent of the diet of breeding Arctic foxes and their weanling cubs.

Polar bear denning was studied on Southampton Island in March and April of 1963. An interesting southwesterly movement pattern was noted for females and cubs which had abandoned dens in the Porsild

Highlands. During the summer the hunting and feeding behaviour of polar bears was observed on Banks Island, and a few specimens collected.

The rising kill of polar bears in Canada and the depletion in the polar bear population in the Soviet Union and Greenland prompted the Canadian Wildlife Service to begin a five-year polar bear project in 1961.

From 6,000 to 7,000 polar bears live in the Canadian Arctic; the annual kill is about 600 animals. Only Eskimos, Treaty Indians, and the few other holders of general hunting licences may legally hunt polar bears. The hides bring from \$70 to \$200; nearly 20 per cent of the skins are kept by the hunters for sled robes, to cover sleeping platforms and to make outer clothing.

When a confident estimate of the world's polar bear population is made, and major patterns of population movements traced, the nations concerned will be in a position to plan an enlightened management program to protect this valuable and impressive species from extinction.

The study of barren-ground caribou and caribou wolves was continued. Human kill—the hunting of caribou for food and hides—is the greatest factor in reducing the herds; others that may contribute are the effect of forest fires on winter range, predation, accidents, and poor calf survival.

In the Mackenzie District, studies of mink, beaver, and muskrat were continued. In the National Parks, big game mammals—mountain sheep and wapiti in particular—were studied.

In Wood Buffalo National Park the low reproductive rate among bison, and problems of disease were investigated. A second outbreak of anthrax in bison outside the Park was dealt with, and studies were begun on the epizootology of the disease.

Damage to cereal crops by wild ducks and sandhill cranes continued to be of concern; much time was also devoted to other species of birds small in numbers or in danger of extinction, notably Ross' goose, the trumpeter swan, and the whooping crane.

Water—A Great Natural Resource



Stream flow measurements are taken at regular intervals by the Water Resources Branch
(Photo by Monty Alford)
on major rivers and streams.

Water—A Great Natural Resource

Water covers seven per cent or 268,000 square miles of the surface of Canada. No other country in the world has such vast reserves of fresh water. Taken for granted—except in time of drought or flood—water is Canada's most vital natural resource.

For more than fifty years, the Water Resources Branch has collected and published basic information on streamflow and water levels on a national basis.

During the year under review 81 stations were added to the gauging system network, bringing the total to 1,846 stations from coast to coast. Sediment survey samples were collected and evaluated at an increasing number of stations. The tendency of a stream to carry silt and sand is now recognized as a key factor in its potential development.

The thorough understanding of the physical nature of the water resources of an area is essential to every development or control project.

Highlight of the year—and the culmination of 20 years of planning and negotiation in which Branch officers played a significant part—was the final approval by Parliament in June, 1964, of the Columbia River Treaty and Protocol.

In the fall of 1964, construction will begin on the vast storage and hydro-electric development which will provide over 4 million kilowatts of power (about one-fifth of Canada's present capacity) at very low cost.

When the first studies were begun by the International Joint Commission in 1944, Branch engineers made field investigations of many possible dam sites. Surveys, mapping, and drilling were required before preliminary designs and cost estimates could be made. Additional records of stream flow were needed for countless thousands of calculations to find the generation possible from the many alternatives that presented themselves. At the end of almost fifteen years, the engineering report was made to the International Joint Commission in 1959.

On the basis of the engineering data, negotiations began in 1959. Decisions had to be made on how the benefits of the undertaking would be shared by Canada and the United States and on the projects to be constructed by each. The Branch provided technical advice on all phases of the negotiations which ended in January, 1964.

The basic aim of the Treaty is to control the erratic flow of the Columbia to the advantage of both countries. The high summer runoff (recorded at Revelstoke as 99 times as great as the minimum flow) has caused damaging floods and loss of life, and results in a great waste of energy. The water that was wasted at time of high flow will now be controlled by three large dams in Canada and possibly a fourth in the United States. The Canadian dams—Mica, Arrow Lakes and Duncan Lake—will regulate the flow of the river and produce power benefits both in Canada and downstream in the United States.

Under the Treaty the extra generation in the United States will be shared equally by both countries. Canada's share of the power benefits over a thirty-year period will be sold to the United States for \$274.8 million, payable in October, 1964. This payment, plus an additional payment of almost \$70 million for flood control benefits in the United States, will cover the full capital costs of the three Treaty dams in Canada—as well as about half the cost of the 1.8 million kilowatts of generating capacity at Mica.

The Treaty gives the United States an option to build a dam on the Kootenay River at Libby, Montana. The project will flood an area that extends up the river into Canada. Canada will contribute 13,700 acres of land required for the reservoir; in return she will benefit from the regulated flow of the river through flood control and increased power generation when the river re-enters Canada downstream of Libby, on the way to its confluence with the Columbia.

The Columbia River Treaty calls for the development of the river in a manner designed to serve the best interests of the people of the regions and the common continental river basin.

The problem of controlling the massive water capacities of the Great Lakes contrasts with the problem of harnessing the turbulent and highly variable Columbia River.

The combined surface area of Lakes Superior, Michigan, Huron, St. Clair, Erie and Ontario, totals almost 100,000 square miles—a vast natural reservoir of fresh water which is used in many ways. These huge

reservoirs dampen out the variations caused by the changes in precipitation from season to season and year to year. The extent of this damping effect is clearly evident in the flow of the St. Lawrence River which drains the system where the range of flow is two to one. In the Columbia, by contrast, the range of flow at Revelstoke is 99 to one.

In the Great Lakes a single season of excessive rainfall or drought is reflected in lake levels for several years. In 1951 and 1952 the Great Lakes were exceedingly high and caused extensive flooding and erosion damage. Yet within a period of the next 12 years the levels were among the lowest on record. Lakes Michigan and Huron established a new low on levels in over a century.

Branch engineers departmentally and in association with others, have carried out a number of studies relating to the fluctuations and trends of the Great Lakes water levels. Records which go back for more than a century reveal variations due to natural as well as man-made causes. Natural variations fall into three groups. Short-period fluctuations are caused by strong winds and sudden changes in air pressures and tides; they last at most for many hours and range from a few inches to about eight feet. Seasonal fluctuations with high levels in the summer and low levels in winter range from about one to two feet. Long-term fluctuations result from the interaction of continuing above or below normal precipitation with the large storage capacity of the lakes.

After three years of sub-normal precipitation (about 80% of normal rate) water levels were critically low during the year under review. Even if precipitation were to increase heavily it would take several years for normal lake levels to be re-established because of the large storage volume that must be replaced.

Man-made influences have also had some bearing on lake levels. Works such as dredging in the St. Clair and Detroit Rivers to improve navigation, diversion of water out of Lake Michigan at Chicago, diversions into Lake Superior from the Albany River watershed which flows into James Bay, and the regulations of outflows of Lakes Superior and Ontario have affected water levels of some or all of the Great Lakes over the years. These effects have been much less than the variations through natural causes.

The whole problem of water levels in the Great Lakes basin is extremely complex.

Similar problems involving the optimum use of water resources are virtually world-wide.

By the end of this century the world's population is expected to double and water consumption to increase three-fold. In the near future an acute water resources problem will face the world.

This has led UNESCO (United Nations Educational, Scientific and Cultural Organization) to sponsor an International Hydrologic Decade, to begin in 1965. During the next ten-year period member nations will co-operate to increase knowledge of the world's water resources so that future planning will be most effective.

A high proportion of the world's fresh water supply lies within Canadian borders; the success of a global study of water resources requires Canada's active participation. The Canadian program will cover a wide range of situations, most of which must be dealt with on a long-term basis; many hydrologic factors cannot be correctly analyzed unless hydrologic data stretching over five to ten years at least are available.

Research and data collection required for the program in Canada will be carried out by the provinces, the universities and the federal government. The Water Resources Branch will contribute to studies such as water budgets of typical river basins, the influence of man on hydrologic systems, and stream-flow formation during winter periods. These will require the collection and analysis of data on streamflow, ice formation and sediment, both for projects initiated by the Branch and to support work being done by other agencies.

During the next five years approximately 150 positions will be added to the engineering, technical and support staff of the Water Resources Branch; this increase will double the existing manpower of the Branch. Water resource development and flood control programs will move rapidly ahead, requiring an expenditure of over \$3 billion during the next ten years.

The knowledge gained and pooled by Canada and member countries during the International Hydrologic Decade will enable both Canada and the world to make better use of the limited supply of fresh water available to mankind.

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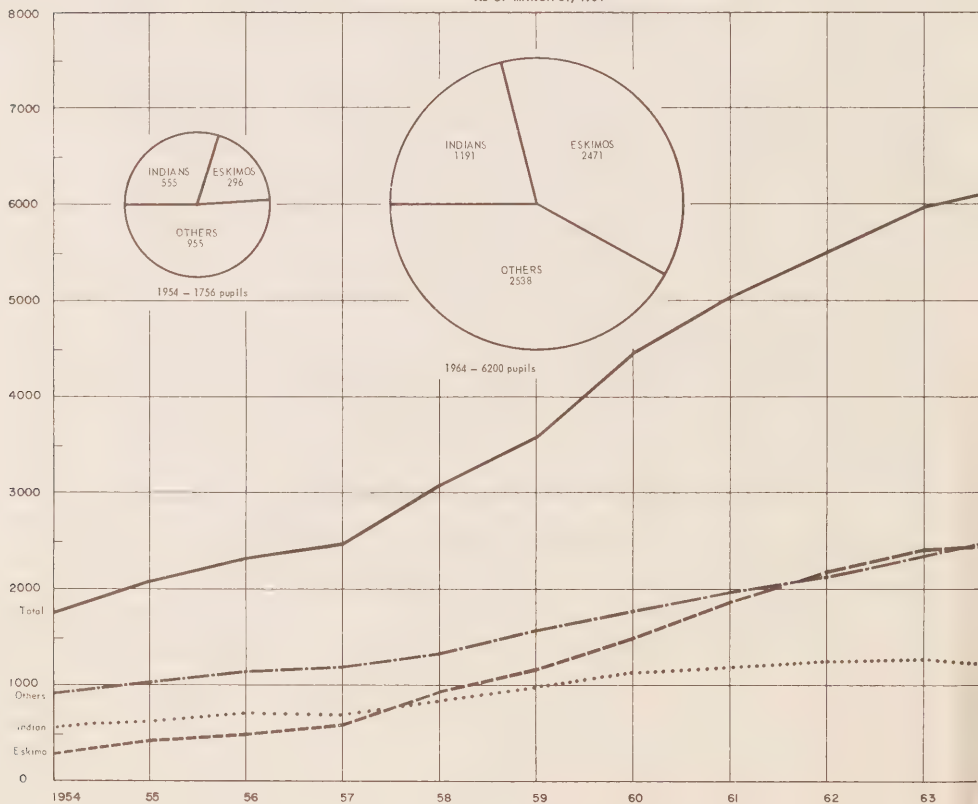
1963-64 School Enrolment¹

(Northwest Territories and Arctic Quebec)

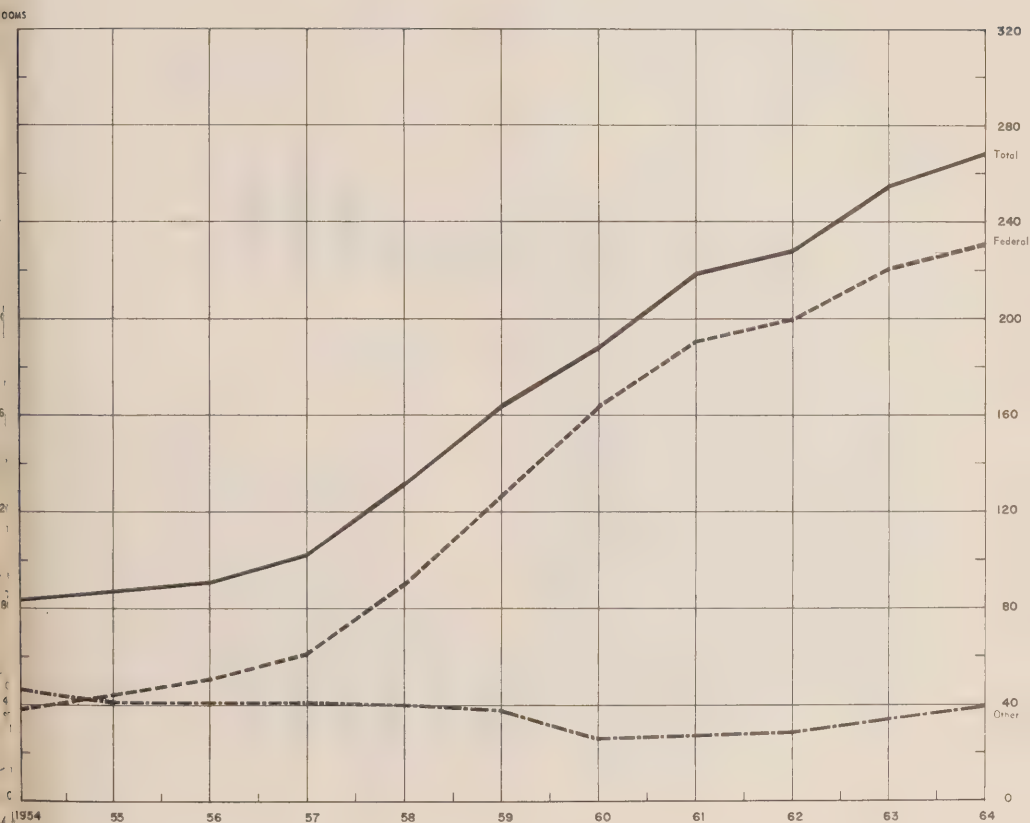
Origin	Enrolment	Compulsory School Age Enrolment	Estimated Total School Age Population	Percentage of children of compulsor school age enrolled
Eskimo.....	2,494	2,284	3,037	75%
Indian.....	1,187	1,039	1,440	72%
Other.....	2,555	2,270	2,299	99%
Total.....	6,236	5,593	6,776	82%

(¹)As of January 31, 1964.

SCHOOL ENROLMENT, N.W.T. AND ARCTIC QUEBEC 1954-1964
AS OF MARCH 31, 1964

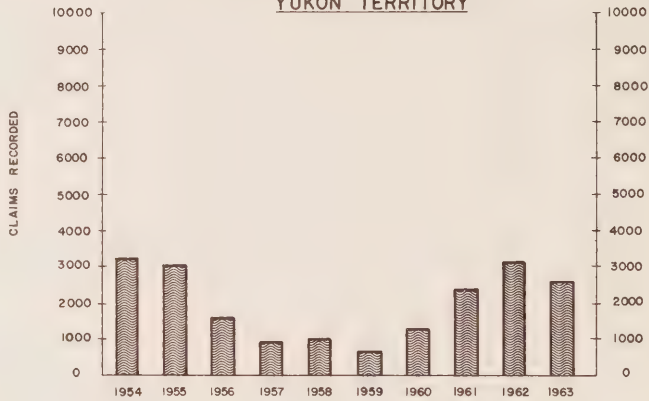


Classroom Growth 1954-1964

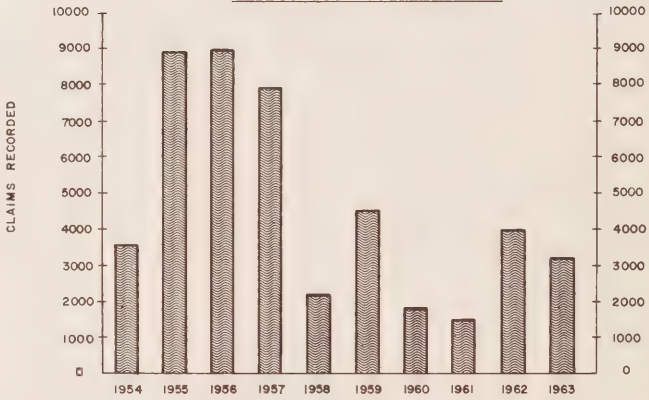


MINERAL CLAIMS RECORDED

YUKON TERRITORY

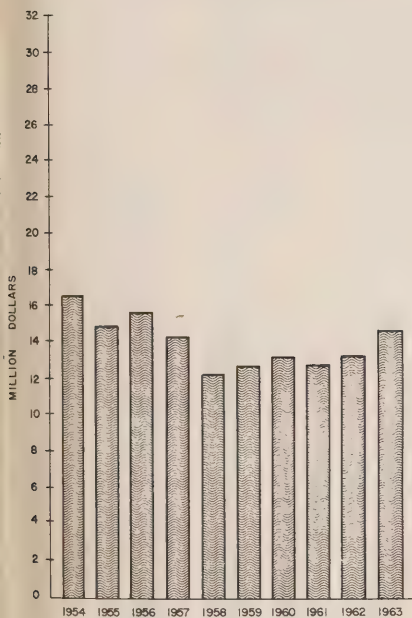


NORTHWEST TERRITORIES

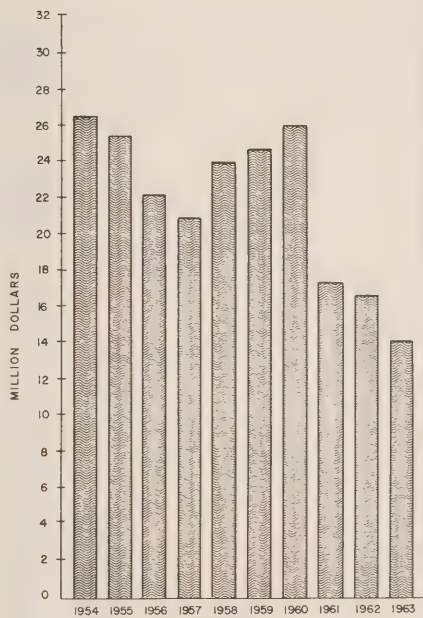


TOTAL VALUE OF MINERAL PRODUCTION

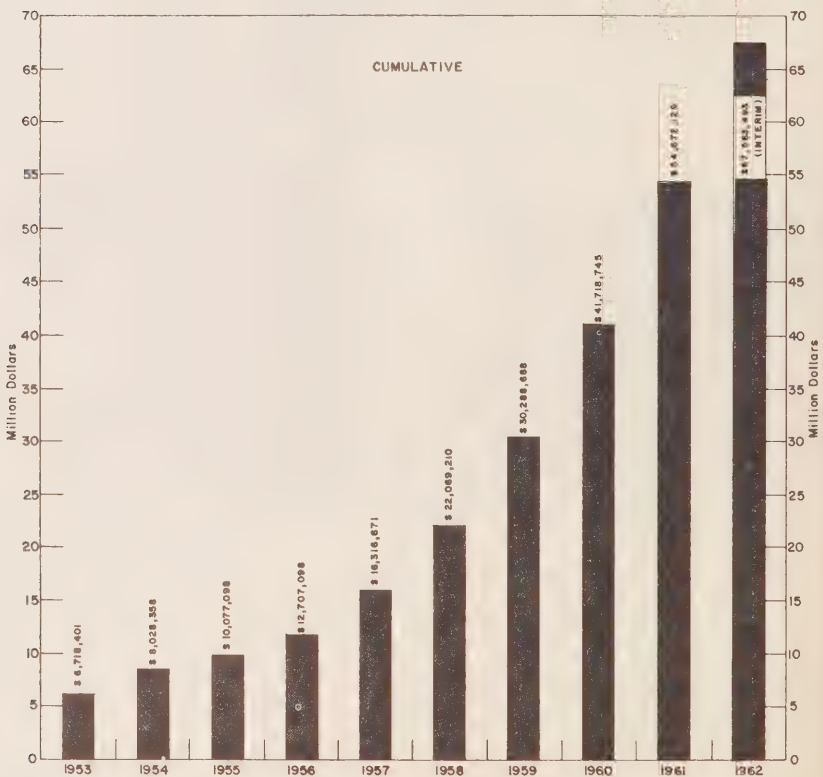
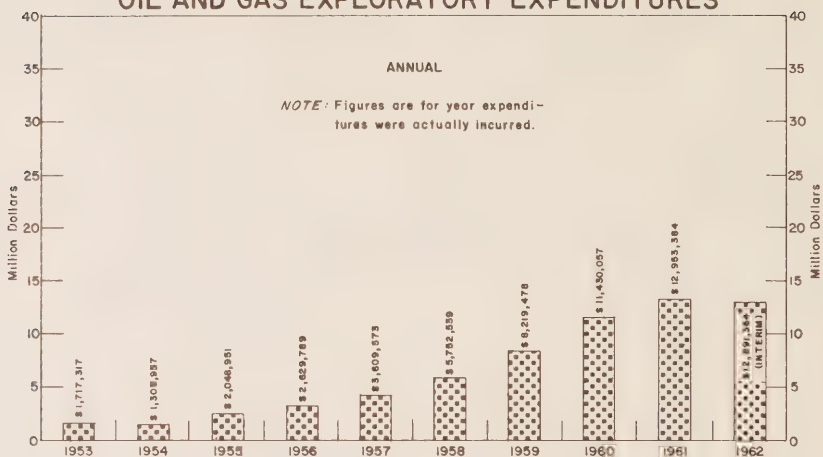
YUKON TERRITORY



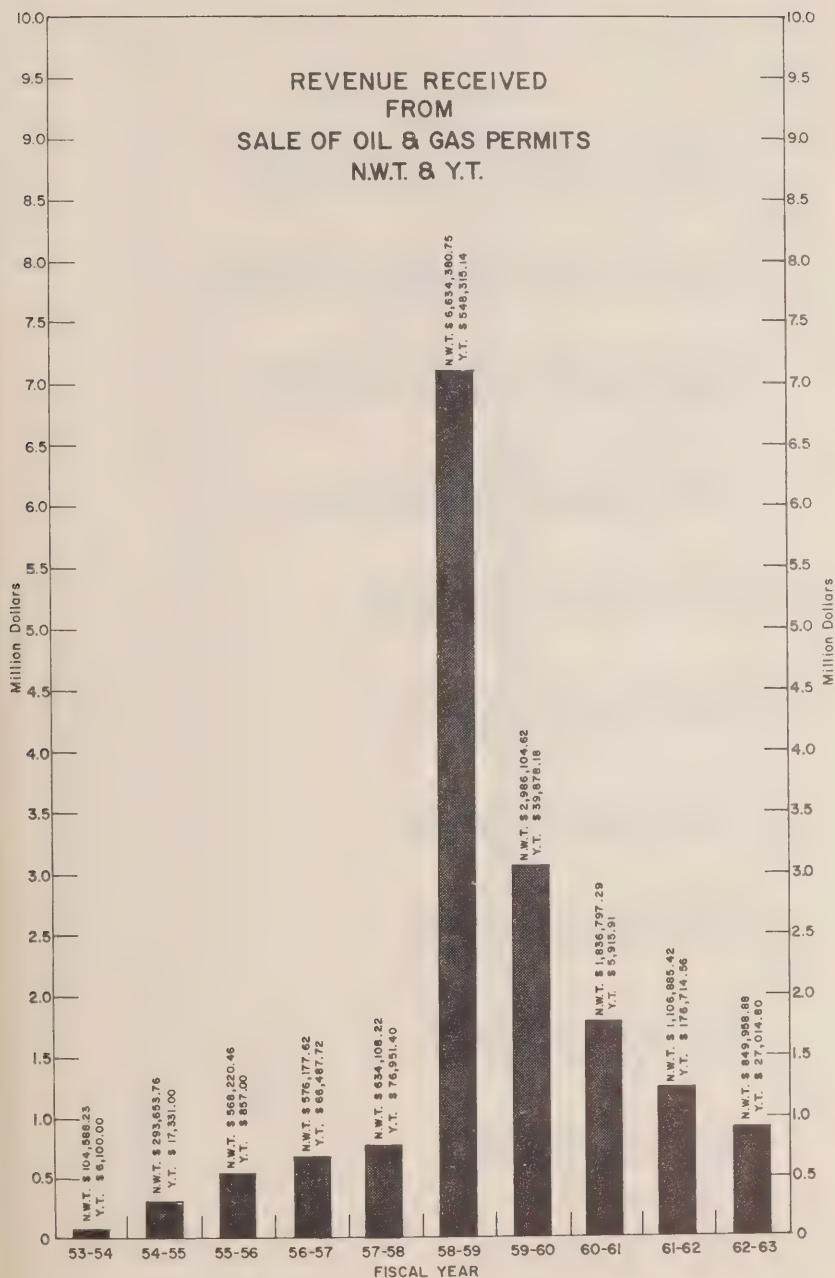
NORTHWEST TERRITORIES

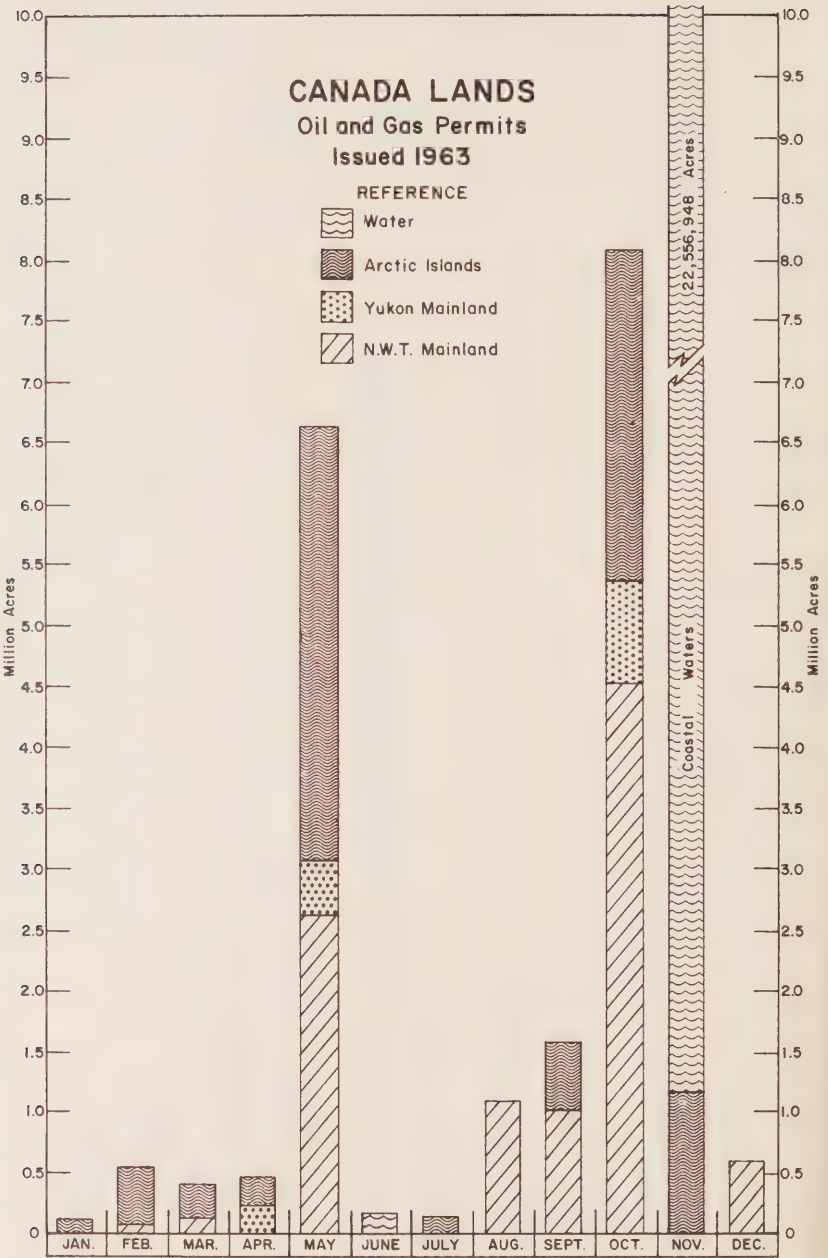


OIL AND GAS EXPLORATORY EXPENDITURES

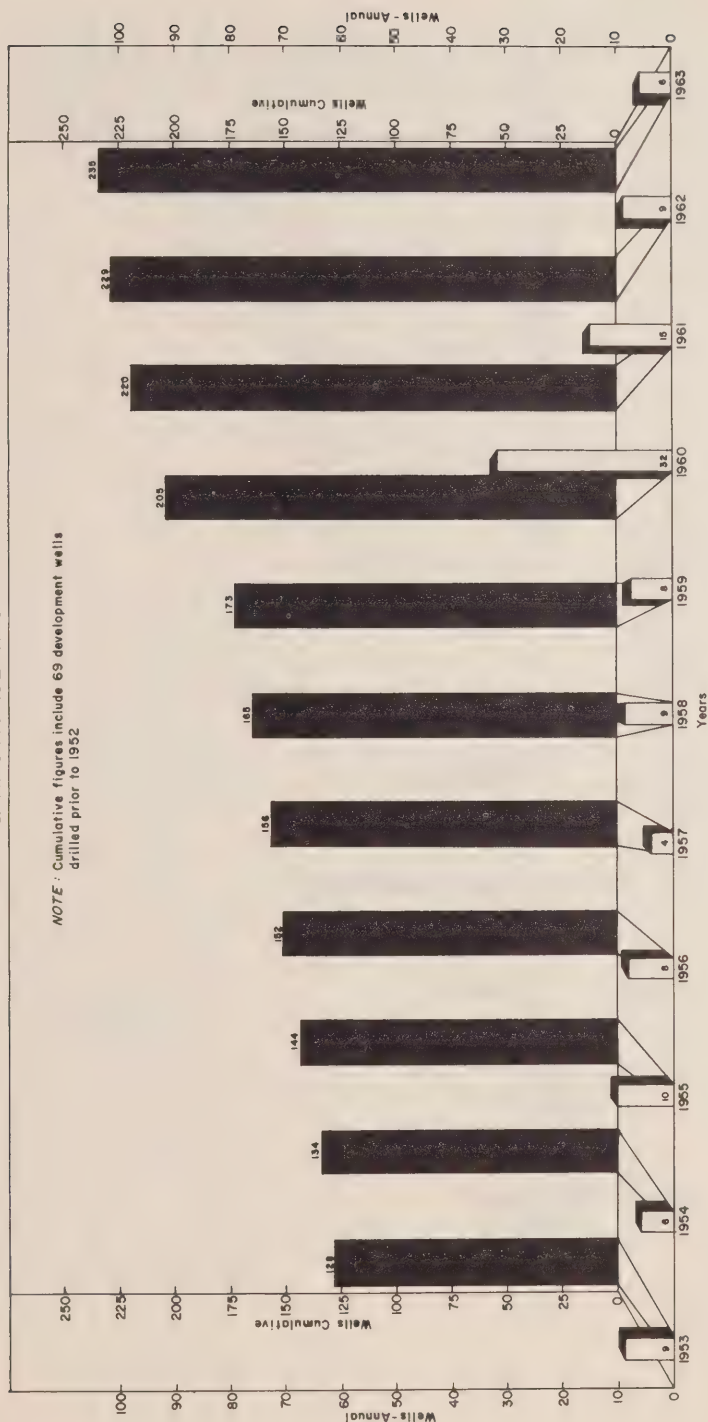


**REVENUE RECEIVED
FROM
SALE OF OIL & GAS PERMITS
N.W.T. & Y.T.**

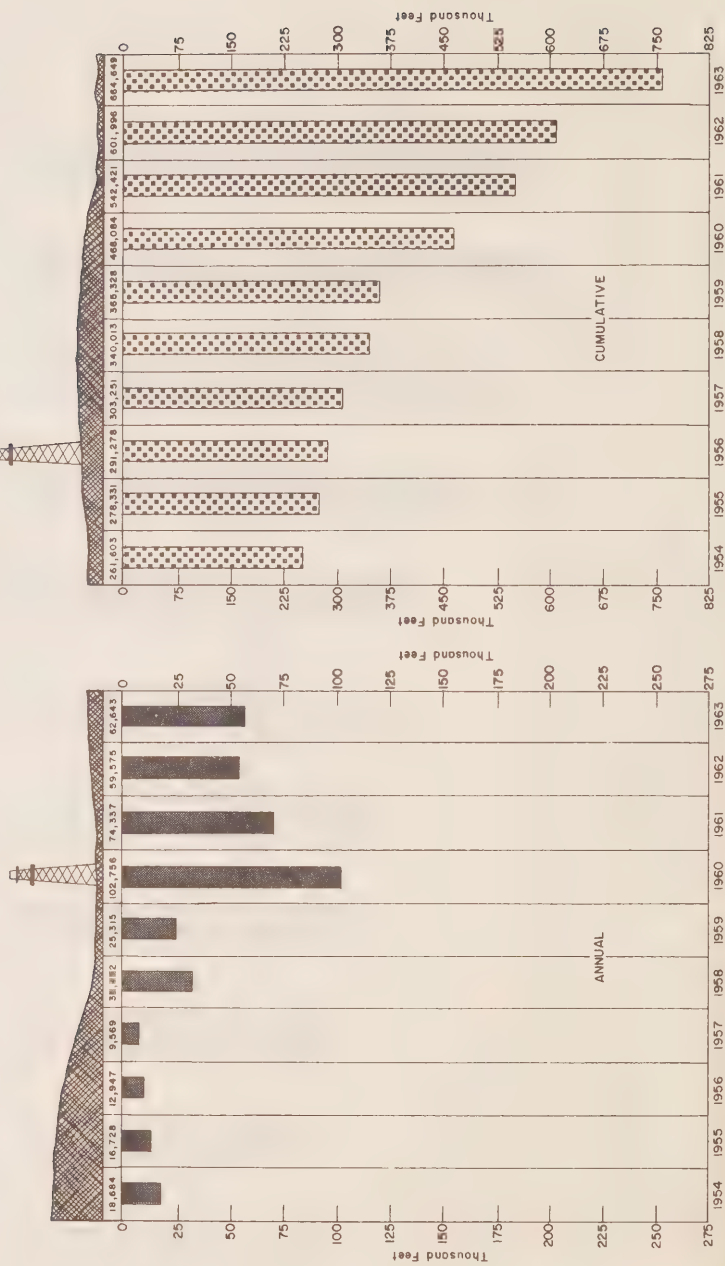


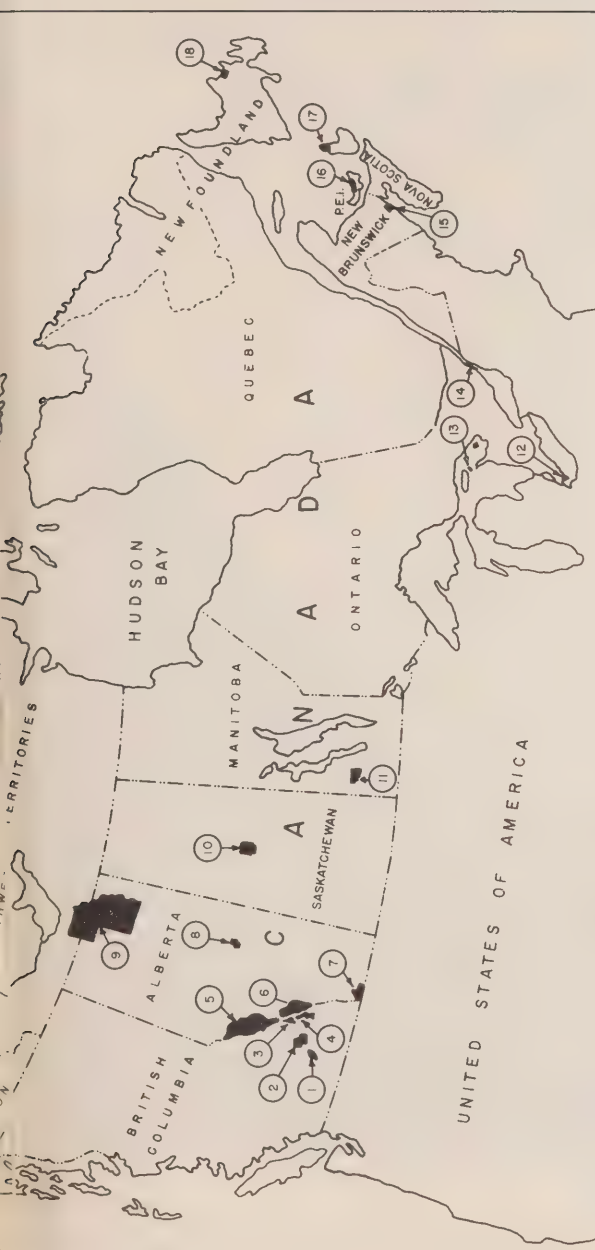


TOTAL WELLS DRILLED YUKON, NORTHWEST TERRITORIES & ARCTIC ISLANDS



TOTAL FOOTAGE DRILLED YUKON, NORTHWEST TERRITORIES & ARCTIC ISLANDS

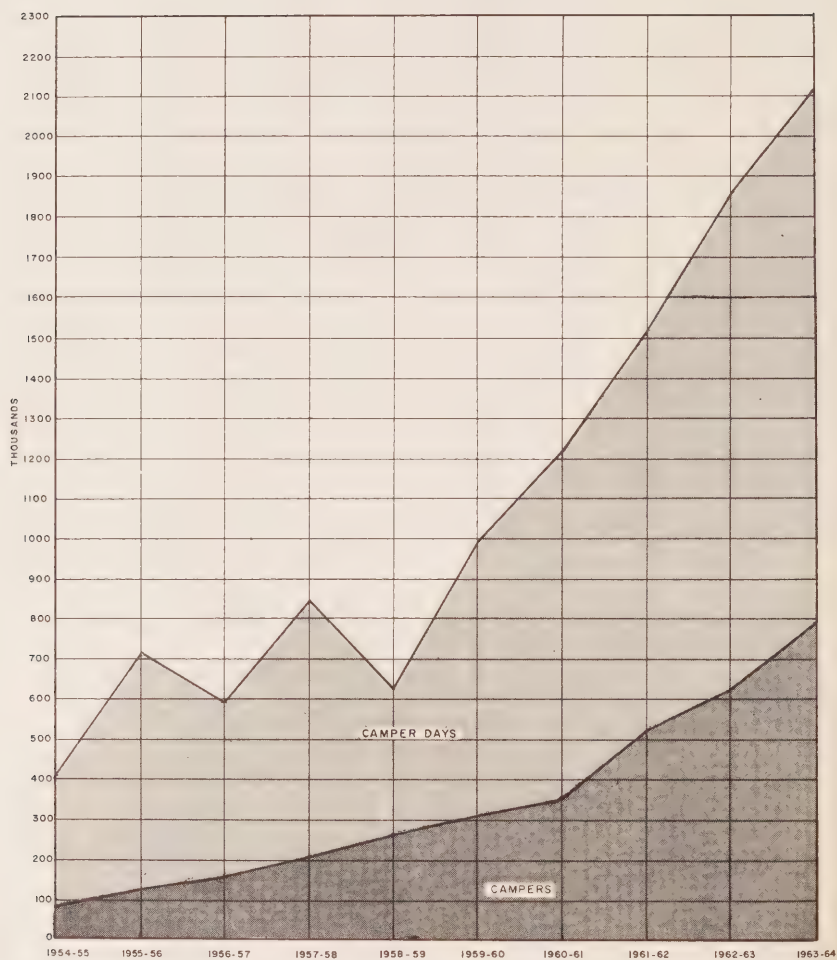




THE NATIONAL PARKS OF CANADA

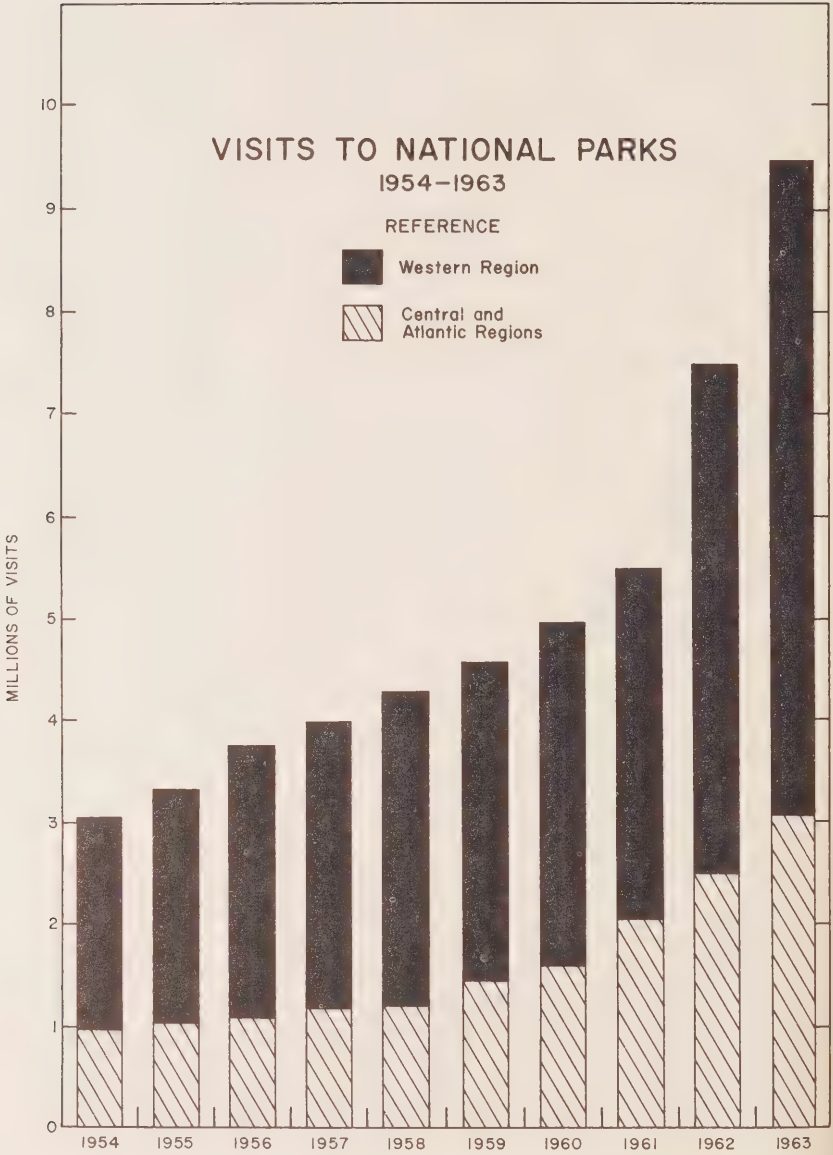
1. Mount Revelstoke	(1914)	100 sq. mi.	7. Waterton Lakes	(1895)	203 sq. mi.	13. Georgian Bay Islands	(1929)	5.4 sq. mi.
2. Glacier	(1886)	521 "	8. Elk Island	(1913)	75 "	14. St. Lawrence Islands	(1914)	260 acres (.4 sq. mi.)
3. Yoho	(1886)	507 "	9. Wood Buffalo	(1922)	17,300 "	15. Fundy	(1948)	79.5 sq. mi.
4. Kootenay	(1920)	543 "	10. Prince Albert	(1927)	1,496 "	16. Prince Edward Island	(1937)	7 "
5. Jasper	(1907)	4,200 "	11. Riding Mountain	(1929)	1,148 "	17. Cape Breton Highlands	(1936)	367 "
6. Banff	(1885)	2,564 "	12. Point Pelee	(1918)	6 "	18. Terra Nova	(1957)	153 "

CAMPGROUND ATTENDANCE 1954-55 TO 1963-64



Campground Attendance

	Campers		Camper Days	
	1963	1962	1963	1962
Banff.....	279,191	202,925	456,500	391,957
Cape Breton Highlands.....	47,370	30,637	100,967	74,134
Elk Island.....	6,692	5,600	9,224	8,571
Fundy.....	77,097	67,814	147,074	116,620
Georgian Bay Islands.....	7,870	7,468	34,828	41,534
Glacier.....	11,420	4,459	12,954	5,636
Jasper.....	100,067	81,055	193,655	173,676
Kootenay.....	30,228	29,735	49,146	45,956
Mount Revelstoke.....	2,377	1,054	2,790	1,151
Point Pelee.....	20,630	20,071	73,725	73,758
Prince Albert.....	26,418	26,476	292,265	266,849
Prince Edward Island.....	39,069	39,021	135,713	156,006
Riding Mountain.....	38,350	31,892	412,424	350,182
St. Lawrence Islands.....	5,515	5,286	13,010	10,347
Terra Nova.....	8,185	6,211	25,880	14,861
Waterton.....	48,657	39,032	88,422	79,518
Yoho.....	41,639	35,103	57,415	53,387
TOTAL.....	790,775	633,839	2,105,992	1,864,143
	24.75% increase		12.97% increase	



**Comparative Statement of Visitors to the National Parks
for the Period April 1 to March 31**

National Parks	1963-64	1962-63	Increase or Decrease	%	
Banff.....	1,650,257	1,374,576	+	275,681	+ 20.05
Cape Breton Highlands.....	615,133	451,911	+	163,222	+ 36.11
Elk Island.....	207,914	176,040	+	31,874	+ 18.10
Fundy.....	494,157	302,340	+	191,817	+ 63.44
Georgian Bay Islands.....	18,052	19,126	-	1,074	- 5.61
Glacier.....	752,512	345,961	+	406,551	+117.51
Jasper.....	468,579	392,987	+	75,592	+ 19.23
Kootenay.....	567,291	541,485	+	25,806	+ 4.76
Mount Revelstoke.....	768,417	428,572	+	339,845	+ 79.29
Point Pelee.....	780,795	667,554	+	113,241	+ 16.96
Prince Albert.....	137,494	137,484	+	10	N/C
Prince Edward Island.....	1,019,104	1,009,021	+	10,083	+ .99
Riding Mountain.....	693,316	654,251	+	39,065	+ 5.97
St. Lawrence Islands.....	77,368	75,239	+	2,129	+ 2.82
Terra Nova.....	55,926	29,915	+	26,011	+ 86.94
Waterton Lakes.....	441,803	444,752	-	2,949	- .66
Yoho.....	678,739	375,189	+	303,550	+ 80.90
Total.....	9,426,857	7,426,403	+	2,000,454	+ 26.93

**Comparative Statement of Visitors to the National Historic Parks
and Major Historic Sites
for Period April 1 to March 31**

	1963-64	1962-63		Increase or Decrease	%
*Alexander Graham Bell.....	91,392	79,659	+	11,733	+ 14.72
*Batoche Rectory.....	7,069	15,350	-	8,281	- 53.94
Fort Amherst.....	3,851	1,764	+	2,087	+118.31
Fort Anne.....	77,201	83,103	-	5,902	- 7.10
Fort Battleford.....	34,807	30,895	+	3,912	+ 12.66
Fort Beausejour.....	43,346	51,454	-	8,108	- 15.75
Fort Chambly.....	85,569	71,053	+	14,516	+ 20.42
Fort Langley.....	105,139	98,560	+	6,579	+ 6.67
Fort Lennox.....	27,943	24,959	+	2,984	+ 11.95
Fortress of Louisbourg.....	40,153	32,347	+	7,806	+ 24.13
Fort Malden.....	41,023	42,254	-	1,231	- 2.91
Fort Rodd Hill.....	39,759	42,533	-	2,774	- 6.52
Fort Wellington.....	51,530	46,666	+	4,864	+ 10.42
Grand Pre.....	63,395	47,871	+	15,524	+ 32.42
Halifax Citadel.....	192,286	243,609	-	51,323	- 21.06
Lower Fort Garry.....	85,391	59,544	+	25,847	+ 43.40
Port Royal Habitation.....	35,947	31,579	+	4,368	+ 13.86
Prince of Wales Fort.....	256	362	-	106	- 29.28
Signal Hill.....	195,208	239,554	-	44,346	- 18.51
*Sir Wilfrid Laurier's Birthplace.....	7,592	8,186	-	594	- 7.25
Woodside.....	12,564	10,738	+	1,826	+ 17.00
National Historic Parks and Major His- toric Sites Total.....	1,241,421	1,262,040	-	20,619	- 1.63
National Parks Total.....	9,426,857	7,426,403	+	2,000,454	+ 26.93
Grand Total.....	10,668,278	8,688,443	+	1,979,835	+ 22.70

*Major Historic Sites

WATER RESOURCES BRANCH

LEGEND

RIVER SYSTEMS INVOLVED IN MAJOR
INVESTIGATION AND STUDY ASSIGNMENT
DURING FISCAL YEAR 1963-1964

△ FEDERAL

1. YUKON
2. MACKENZIE
3. PORCUPINE-PEEL-RAT
4. PEACE

○ FEDERAL-PROVINCIAL

5. FRASER
6. NELSON
7. GREATER WINNIPEG FLOODWAY
8. LAKE OF THE WOODS-WINNIPEG
9. OTTAWA
10. SAINT JOHN

□ INTERNATIONAL

11. COLUMBIA
12. ST. MARY-MILK
13. SOURIS-RED-PEMBINA
14. GREAT LAKES-ST. LAWRENCE
15. ST. CROIX



CANADA

MAJOR INVESTIGATIONS AND STUDIES — 1963-1964

Classified position strength as at April 1, 1964

<i>Branch</i>	<i>Ottawa</i>	<i>Provinces</i>	<i>Yukon</i>	<i>N.W.T.</i>	<i>Total</i>
Departmental Administration.....	214	—	—	8	222
National Parks.....	180	685	1	5	871
Northern Administration.....	349	10	45	658	1,062
Water Resources.....	103	167	4	7	281
TOTAL.....	846	862	50	678	2,436

Summary of Revenues and Expenditures 1963-64

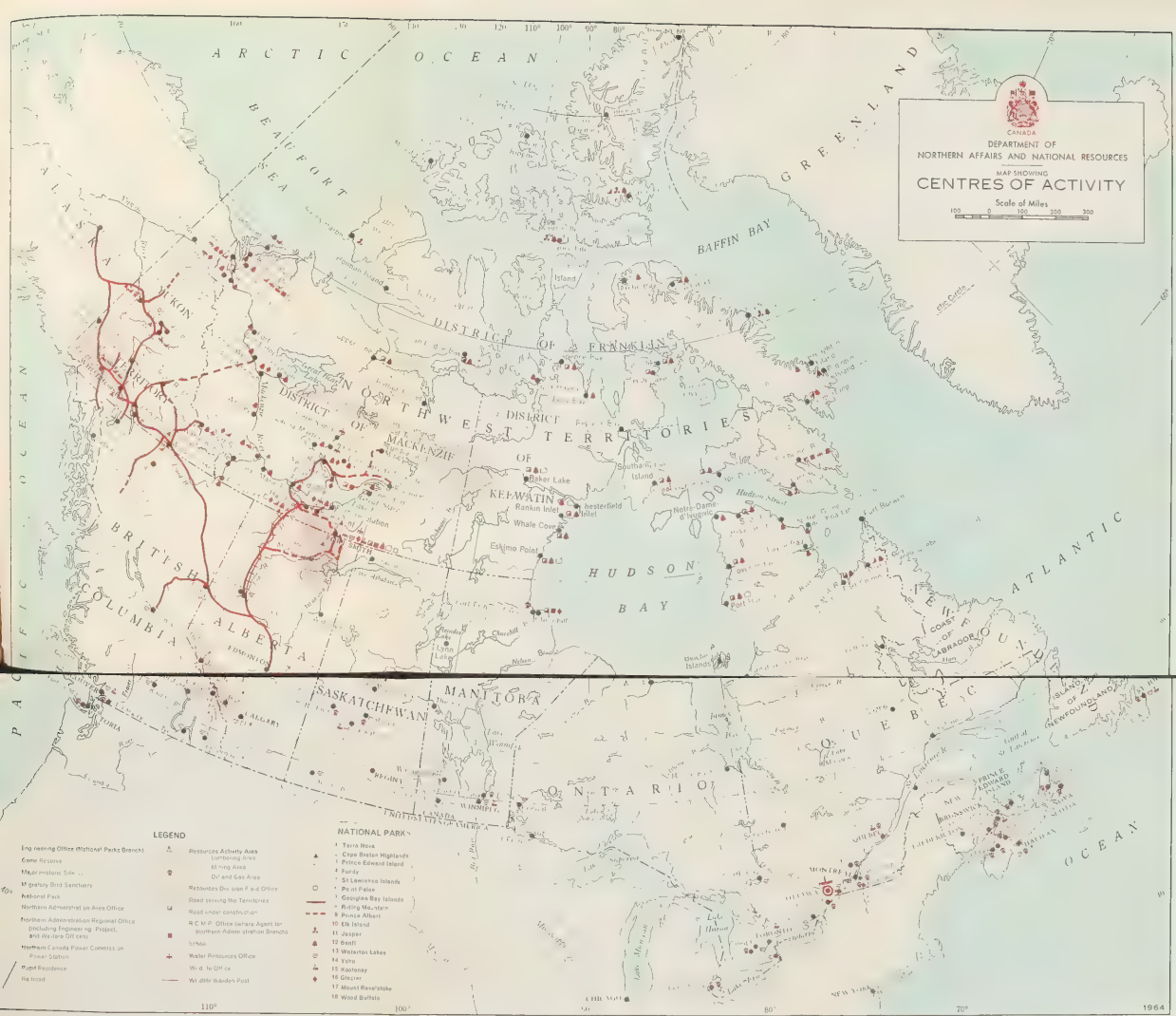
	<i>Revenues</i>	<i>Expenditures</i>
ADMINISTRATION SERVICES.....	\$	\$ 1,153,329.86
Contributions to the Provinces for Campground and Picnic Area Developments.....		250,000.00
Roads to Resources.....		8,132,491.64
NORTHERN CO-ORDINATION AND RESEARCH CENTRE.....		237,789.30
NATIONAL PARKS BRANCH		
Branch Administration.....		286,823.50
National Parks and Historic Sites.....	2,890,892.04	21,382,271.21
Grant to Jack Miner Migratory Bird Foundation.....		5,000.00
Grant in aid of the development of the International Peace Garden in Manitoba.....		15,000.00
National Battlefields Commission.....		231,000.00
Canadian Wildlife Service.....	4,911.28	1,021,109.44
	2,895,803.32	22,941,204.15
WATER RESOURCES BRANCH		
Administration and Construction.....	138,362.34	2,170,920.20
Studies and Surveys of the Columbia River Watershed in Canada.....		37,196.95
Fraser River—federal expenditures in connection with investigations carried out by the Fraser River Board.....		64,981.95
Nelson River Study—Expenditures in connection with investigations to be carried out in accordance with an agreement entered into between Canada and Manitoba.....		450,000.00
Contributions to the Provinces towards the construction of dams and other works to assist in the conservation and control of water resources in accordance with agreements entered into between Canada and the Provinces.....		7,600,014.57
	138,362.34	10,323,113.67

	<i>Revenues</i>	<i>Expenditures</i>
NORTHERN ADMINISTRATION BRANCH		
Branch Administration.....	3,719.68	1,115,041.01
(Public Lands).....	344,154.82	
Reduction in seed, grain and relief account.....		45,748.12
Education.....	262,200.38	7,238,271.27
Welfare and Industrial.....	444,113.50	4,040,703.80
Yukon Territory.....	881,747.21	5,237,263.28
Northwest Territories.....	2,000,911.73	16,583,544.31
	<u>3,936,847.82</u>	<u>34,260,571.79</u>
OTHERS.....		35,518.38
TOTALS FOR DEPARTMENT.....	<u>6,971,013.48</u>	<u>77,334,018.79</u>

DIRECTORY TO ADDITIONAL INFORMATION

General Information.....	Information Services Division, Department of Northern Affairs and National Resources, 85 Sparks Street, Ottawa.
Monthly oil and gas report.....	Resources Division, Northern Administration Branch, Department of Northern Affairs and National Resources, 150 Kent Street, Ottawa.
*north (a bi-monthly magazine).....	The Editor, north, Northern Administration Branch, Department of Northern Affairs and National Resources, 150 Kent Street, Ottawa.
National Parks.....	National Parks Branch, Department of Northern Affairs and National Resources, 150 Wellington Street, Ottawa.
Canadian Wildlife.....	Canadian Wildlife Service, Department of Northern Affairs and National Resources, 150 Wellington Street, Ottawa.
Water Resources.....	Water Resources Branch, Department of Northern Affairs and National Resources, 150 Wellington Street, Ottawa.

*available from the Queen's Printer, Ottawa.



Government
Publications



ANNUAL REPORT

Department of Northern Affairs and National Resources



FISCAL YEAR

1964-1965



Department of Northern Affairs and National Resources
Annual Report Fiscal Year 1964-1965

Issued under the authority of
HONOURABLE ARTHUR LAING, P.C., M.P., B.S.A.,
Minister of Northern Affairs and National Resources



1015179

ROGER DUHAMEL, F.R.S.C.
QUEEN'S PRINTER AND CONTROLLER OF STATIONERY
OTTAWA, 1965

Cat. No. R1-1965

*The Honourable Arthur Laing, P.C., M.P., B.S.A.,
Minister of Northern Affairs and
National Resources.*

SIR:

I have the honour to submit the Twelfth Annual Report of the Department of Northern Affairs and National Resources for the fiscal year ending March 31, 1965.

The new format for the Report, first used in 1963, is basically unchanged this year. However, the scope of the chapters in this year's Report has been expanded to give a broader coverage of the varied activities of the Department. The number of statistical appendices has also been increased.

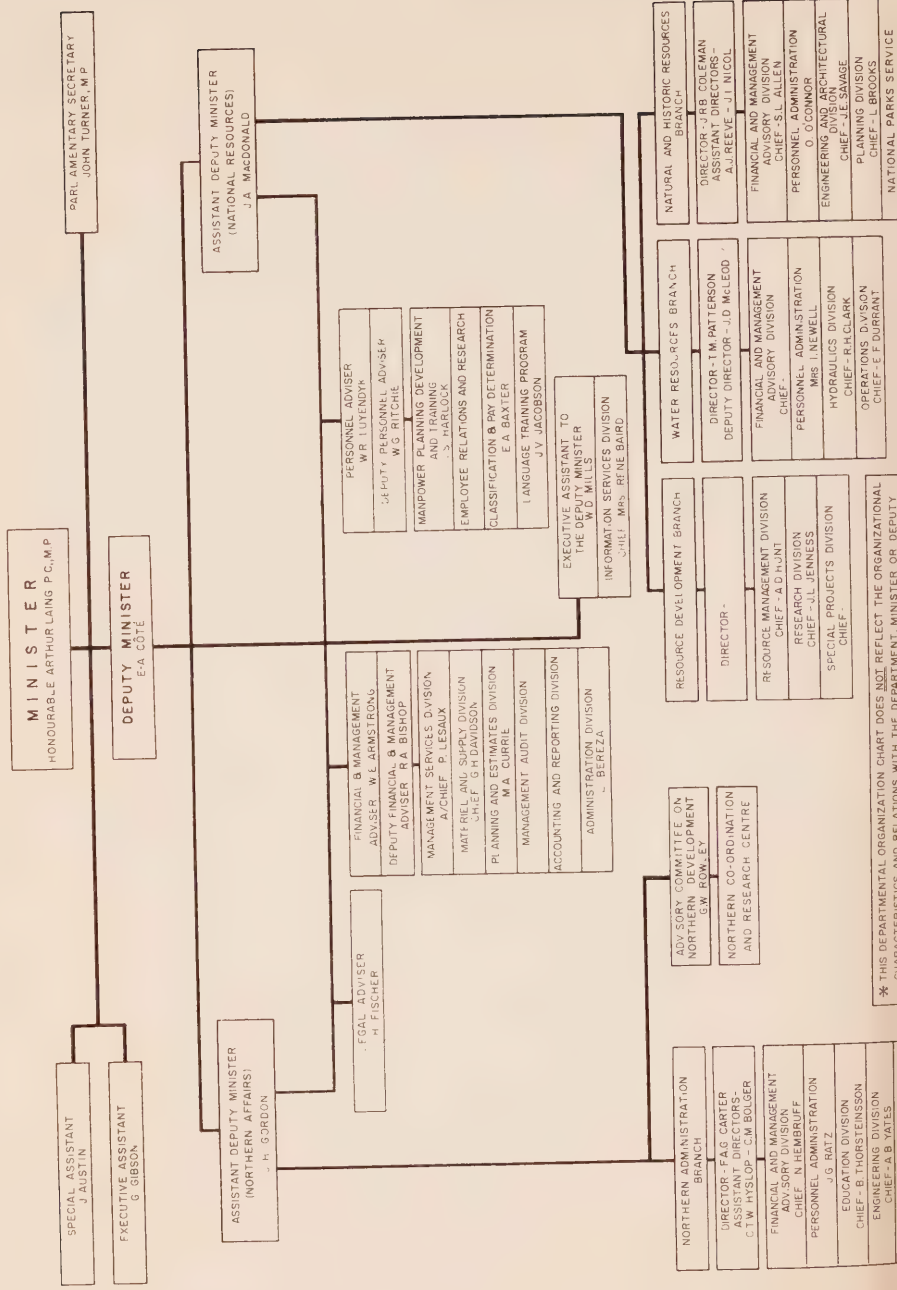
Much progress has been made to implement the management improvement program which was recommended to and accepted by the Department. While the implementation of these recommendations will not be complete for some time the rapid adoption of more effective managerial techniques will facilitate the attainment of the objectives set by Parliament for this Department both in Canada's northland and in the field of resources.

The staff of the Department — at all levels — continues to put forth a great effort to serve the people of the Yukon and Northwest Territories and their Councils as well as the people of Canada visiting the national and historic parks or enjoying the benefits of Canada's national resources. Co-ordination of federal thought and action in this latter field seems to be developing satisfactorily. I believe that the employees of the Department deserve credit for their zeal in the public service.

Respectfully submitted,

E. A. CÔTÉ,
Deputy Minister.

DEPARTMENT OF NORTHERN AFFAIRS AND NATIONAL RESOURCES ORGANIZATION CHART*



* THIS DEPARTMENTAL ORGANIZATION CHART DOES NOT REFLECT THE ORGANIZATIONAL RESPONSIBILITIES AND RELATIONS WITH THE DEPARTMENT, MINISTER OR DEPUTY MINISTER

The North



Arithmetic lesson at federal day school in Resolute Bay. A total of 6,907 youngsters, including 2,772 Eskimo and 1,310 Indian, attend school in the Northwest Territories and Arctic Quebec.

Education

During the year, school enrolment in the Northwest Territories and Arctic Quebec reached a total of 6907 pupils, an increase of 647 over previous attendance figures. Although new construction was below normal owing to government economy measures in 1962, there was a net increase of 29 classrooms in federal schools and three in municipal district schools. A five-year building program to begin in 1965-66 is designed to bring schools to all children north of the provinces by 1970.

Early in 1964, an important addition was made to the school system when four accommodation wings and the RCEME workshop of the vacated military complex at Fort Churchill were converted to serve as a temporary academic upgrading and pre-vocational training school. This school consists of four classrooms, three modern shops (carpentry, mechanics and metal working) and two home economics rooms. The remaining area in the two-storey wings was used for student dormitories.

This new accommodation is being used to provide older Eskimo youngsters from the Eastern Arctic and Arctic Quebec with academic upgrading and pre-vocational training in advance of the planned establishment of permanent facilities. In a number of isolated settlements schools have been available to teen-aged pupils for only two or three terms. Teachers, on occasion, have tutored older boys and girls after hours in an attempt to bring them to an academic level where they would be accepted in vocational training courses. The Churchill school is the first opportunity to give academic upgrading to complete classes of older pupils in the Eastern Arctic and about 100 attended, dividing their time between academic work and pre-vocational training in the shops or home economics rooms.

For these mature youngsters, the Education Division prepared special programs in science, social studies, mathematics and the language arts. Doors to a completely new world were opened in the social studies and biology classes with the study of such unfamiliar objects as trees

and vegetables. Other projects combined both academic and vocational education in integrated units.

The dormitories in the Fort Churchill building were also used by young Eskimos in more advanced school grades; over fifty pupils, close to the normal age-grade pattern in the south, were brought in by plane to take regular academic work in the Duke of Edinburgh School operated under the Province of Manitoba.

Of the 150 youngsters who attended the Churchill schools, all but six will return at the beginning of the fall term in 1965, and accommodation is being prepared for an additional 100 pupils. The total attendance for the 1965-66 term is expected to be 250; of these about 75 will undertake normal academic course work.

In total, across the north, construction will begin or be completed on 95 classrooms and 476 beds (pupil residences) during the 1965-66 fiscal year. New schools, using temporary facilities, were opened at Pine Point and Port Burwell during the year; permanent buildings will be erected in both of these places during 1965-66. The one-room schools at Tungsten and Wrigley in the Northwest Territories and Port-Nouveau-Quebec in Arctic Quebec, all of which were closed in 1963-64, were reopened for the 1964-65 term.

School programs are adapted to the unusual background of northern youngsters. Number charts for use in mathematics (using groups of polar bears, seals and lemmings) and science charts were produced during the year. The third filmstrip in a series of four on "Government of the Northwest Territories" was completed. During the year practical programs in industrial arts, homemaking and related activities were introduced to schools in the north on an experimental basis. These courses are planned to meet a wide range of needs from those of pupils who will engage in wage employment to those who will return to the traditional life on the land. Teaching programs in trapping and fur preparation, care and use of firearms, outboard motors, child care, soapstone carving, northern foods and clothing are a few of the topics in key with the northern setting. These programs are also useful for adult training programs in the smaller northern communities.

Experimental editions of physical education and social studies guides were prepared for teachers in the Eastern Arctic. In small settlement schools, physical training is usually confined to the classroom, or to games that can be played in the snow. The timing of the indoor exercise period must be considered so that overheated youngsters are not sent

directly into extremely cold temperatures; rhythmic exercise may include the traditional drum dances. The social studies guide suggests that teachers study and teach the local history of the settlements; individual booklets on each area will be written as research is completed. For teachers in the Mackenzie District, a Language Arts Curriculum Guide was printed.

To prepare the teachers for living and teaching in the north, in-service training courses in mathematics were also held. Orientation courses in teaching English as a second language, social studies, mathematics and science were given in both Mackenzie and Arctic Districts.

Lists of filmstrips, films and books and other instructional materials recommended for purchase were sent out to northern schools by the Audio-Visual and School Library Services.

The need for adult education in the Northwest Territories is becoming more acute as settlements develop co-operatives and small businesses and new foods and health measures are introduced. A shortage of staff has hampered progress; courses at present are mainly conducted by teachers on a voluntary basis or by others in the settlement on contract. Instructors work with an interpreter to explain the meaning of English words; teaching kits, including an instructor's manual, films, maps and pictures are supplied by the Adult Education Section. During the year three topics for adult study were chosen, and learners' workbooks, using from 60 to 100 words from a 400-word basic English vocabulary were given to each member of the classes. The topics deal with current events ("The Northwest Territories of Canada"), teach new concepts ("The Family and Money") or deal with the problems or interests of a group ("Co-operatives in the North").

Under the Vocational Education Program a total of 528 persons including 244 Eskimos and 100 Indians received training in courses that ranged from one-week courses in the basic skills necessary for livelihood in the north to courses covering a period of years at southern Canadian institutes of technology. Northwest Territories certificates for trade and proficiency were issued to 25 trainees on provincial or other accredited trade certification and to 25 others as a result of written examinations. Ten apprentices were enrolled in the Apprentice Training Program.

In the academic field, 25 applications were approved for financial assistance to attend university; 13 of these successful applicants received both grants and loans. The total financial commitment for the year under Northwest Territories Financial Assistance for Higher Education was

\$21,931, an increase of \$3,320 over the first year of the program. Under the Canada Student Loans Act, passed in July 1964, nine applications totalling \$9,000 were approved.

The \$800 Northwest Territories Scholarship was awarded to Mr. Bruce Melvin Florence of Yellowknife, N.W.T., who attended the University of British Columbia in the Faculty of Commerce during 1964-65. The National Chapter of the Imperial Order Daughters of the Empire has offered 20 achievement awards of \$25 each to students in secondary school grades. These will be made on the basis of achievement during the 1964-65 school year.

Engineering

Housing

A number of families in the Northwest Territories, including Eskimo families, can afford housing under the National Housing Act at southern prices. These people, who are eligible for a first mortgage loan through Central Mortgage and Housing Corporation, may get a second mortgage loan up to \$2,000 from the territorial government; as of March 31, 1965, seven loans have been made for a total of \$11,148.

The great majority of Eskimo families cannot afford to buy or maintain houses under the National Housing Act. In 1959 a program to provide housing began with a minimum house (280 square feet) and soon developed to include larger houses costing up to \$7,000 for families able to pay for them. The government subsidizes each house in the amount of \$1,000, regardless of cost; the balance is covered by the labour of the Eskimo buyer, by money borrowed from the Eskimo loan fund, or by cash.

At the end of the year under review 800 houses had been built and at least another 1500 will be needed during the next three or four years.

By mid-1964, it was evident that changes were needed in Eskimo housing policy, and in December, 1964, the Northern Administration Branch was granted approval in principle to put forward a subsidized rental scheme with a re-sale element.

The original basic house was discontinued and a new house (the Angirraq) was designed to be manufactured under the low-cost housing plan. The Angirraq (with an area of 384 square feet) has a porch with built-in storage shelves, a washroom and sleeping quarters that are partitioned off from the main living area.

Many ideas for the construction of the Angirraq came from the study of a test-model low-cost prefabricated house erected on the grounds of the National Research Council. New and simple prefabrication

techniques have produced a house that is larger, more pleasing to the eye and less costly (\$2400 F.O.B. at Montreal).

Low-cost housing units were bought in bulk by the Engineering Division. On an experimental basis, material for conventional houses to be built by the Eskimos themselves, was purchased in addition to the pre-fabricated units. Houses purchased during the year (as well as schools, garages and warehouses) are either on site or stockpiled in Montreal awaiting shipment; construction work on these will go ahead in 1965.

A general housing survey throughout the north was begun under the direction of the Branch Housing Administrator in January, 1965.

Community planning

The basic information for settlement planning includes topographical plans (on a scale of 1" = 100' with 5' contours showing all physical and cultural features), weather data and the collection of terrain and soil information.

At the end of the current year sixty sites in the north had been mapped in detail; terrain and soil analysis had been completed for forty-one. Engineering consultants' reports were prepared for twenty-five sites; thirteen of these include town planning and twelve deal only with servicing (water supply, sewage and garbage disposal).

At the Pine Point settlement, planning and development were virtually completed; the redevelopment of Hay River proceeded well, with the construction of houses and additional roads and streets in the new townsite.

Plans are continuing to standardize electrical services throughout the north. Community freezers are also being standardized so that freezer units will be interchangeable, and ready for emergency installation and use.

A large fish-freezing plant was purchased and shipped to Wellington Bay for operation there; seven plug-unit freezers (for use in fish freezing) were produced and sent to the Eastern Arctic.

In certain northern settlements the Department continued to sell fuel oil to the Hudson's Bay Company for distribution to private consumers; one major oil company is continuing studies of the economies of sale, delivery and storage of bulk oil in northern communities.

At Bellin (Payne Bay), Pangnirtung, Pond Inlet, Arctic Bay and Grise Fiord, plans are underway for the Department of Transport to

install radio beacons during the 1965 construction season. Beacons are being installed at Povungnituk and Saglouc by a private company.

Under the Eskimo Small Boats Assistance Plan, five boats purchased by Eskimo fishermen, were shipped to their owners. In the summer season, 1965, another twenty boats will be delivered.

Maintenance and Research

At Frobisher Bay various government activities are now being combined under single departments. The former United States Strategic Air Command complex has been occupied by federal departments in keeping with direction from the Treasury Board. All departmental equipment and vehicles (with the exception of one light vehicle and a fire-fighting vehicle kept for emergency use at Apex Hill) are housed in the federal complex.

The Department of Transport is the agency for the repair of federal equipment and vehicles. Standardization by make or type of vehicle for large northern settlements was discussed, and Frobisher Bay has been selected as the pilot for the project. Specifications were prepared for approximately 95 pieces of construction and mechanical equipment and vehicles.

During 1965, the Department of Northern Affairs and National Resources is expected to take full responsibility as the agency for the maintenance and janitorial services of all federal buildings, and for all stores requirements — except items exclusive to any department such as drugs and surgical instruments to National Health and Welfare.

The Department assumed the responsibility for the delivery of potable water and collection of garbage and sewage for the entire settlement during 1964. Beginning in 1965, these services will be performed by contract.

Frobisher Bay is the site of an experimental piped water and sewage system to be installed during 1965. Both water and sewage will be recirculated continuously in loops; heat will be added by means of coils in tanks (also in the loops) to keep each medium above freezing. A plastic-coated aluminum pipe with Victaulic fittings will be tried for the recirculation lines, and both will be enclosed in a nestable corrugated steel culvert-type pipe for protection against damage and ease of access to the piping inside. Test variations in the installation will be made — such as burial of a section in the ground, partial burial and complete exposure to the air.

At Cape Dorset, an experimental recirculating sewage system installed in the new three-classroom school has proved most satisfactory from the public health point of view.

Roads and Buildings

Among the responsibilities of the Engineering Division are the construction and maintenance of buildings and roads. In the Yukon the spring thaw sent many streams on new courses, causing considerable damage to roadbeds and buildings.

A large section of Dawson was inundated by the overflow of the Yukon River and heavy washout and erosion damage on the Stewart Crossing to Dawson Highway increased repair work for the maintenance crews.

On the Whitehorse-Keno Highway, 21.3 miles of reconstruction were completed; culverts and guide rails were installed at several locations (including 1100 feet on Two-Mile Hill at Whitehorse) and four bridge site surveys were carried out.

Five bridges were replaced during the year on the Canol Road. Construction work continued on the Watson Lake to Ross River road. Bridges on the Nahanni Range Road were inspected and reinforced to bring the bridges up to minimum loading strength for summer traffic.

New building construction begun in 1964 in the Yukon was virtually complete. Consultants were appointed to carry out the design for a jail in Whitehorse.

In the Northwest Territories general maintenance was carried out on all highways. A section of the Fort Smith Highway (from the Hay River Highway to the junction of the Pine Point Highway) was completed; the work included the construction of highway bridges over the Hay River and the Buffalo River, as well as three minor bridges. The 14-mile Pine Point Highway was completed.

Location surveys were finished on the proposed Mackenzie Highway extension to Fort Simpson. Right-of-way clearing between Mile 38 and Fort Smith on the Fort Smith Highway was completed. The location survey for a proposed road from Pine Point to Fort Resolution was carried out. Access roads were built around the Hudson's Bay Company's Island in Rae to bring water and sewer services to the residences.

Between May 29th, 1964 and November 16th, 1964, the MV "Johnny Berens" ferry across the Mackenzie River near Fort Providence made 7,438 trips carrying 7,788 vehicles.

Resources

Mining, Oil, and Gas

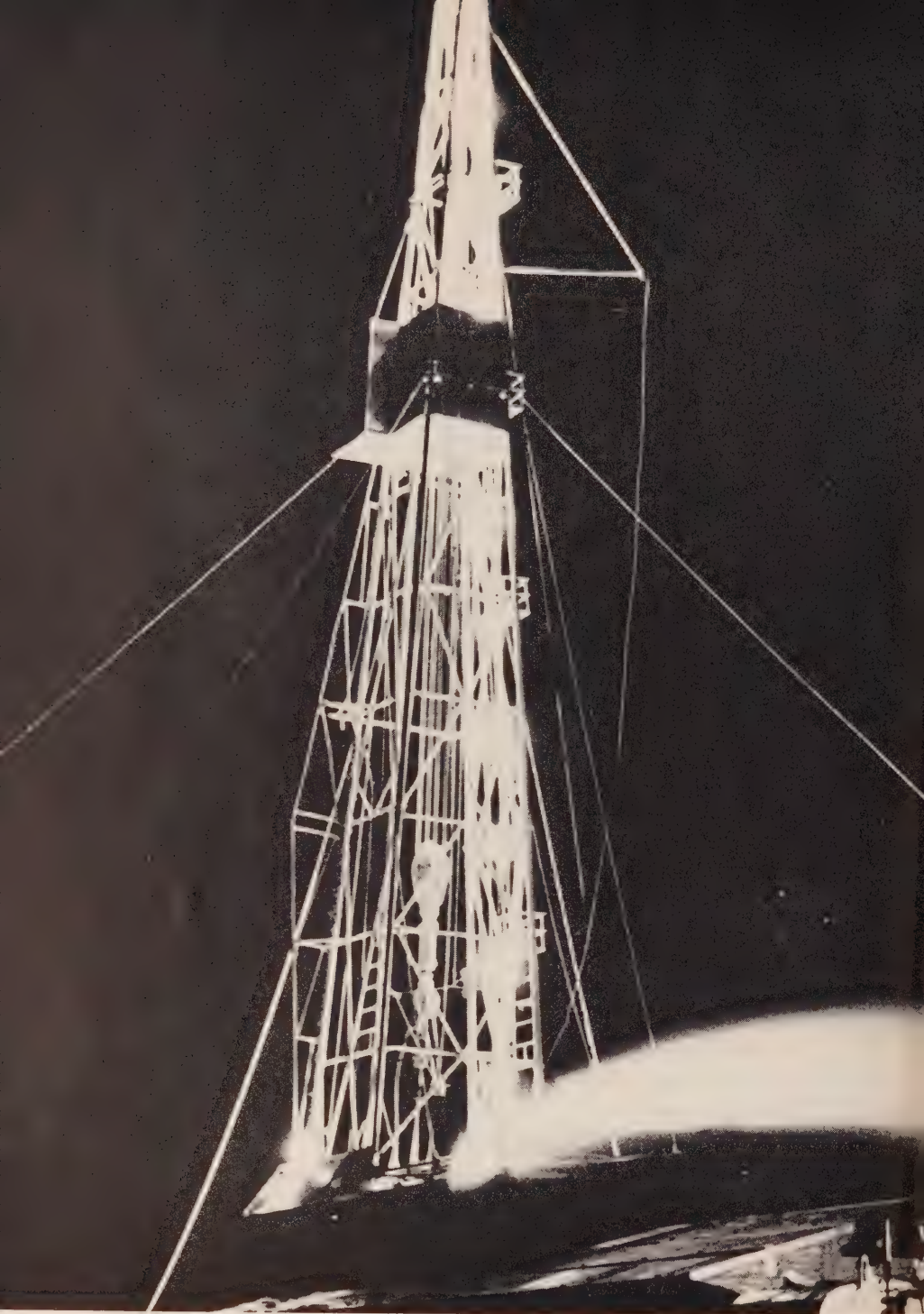
The extensive high-grade iron ore deposits (estimated at 127.7 million tons) on northern Baffin Island were discovered in 1962.

During the past two years, exploratory work on the site included geophysical surveys, drilling, surface sampling, the partial construction of a 30-mile tote road and a 2700-foot airstrip at the Mary River base camp. Ground surveys were made for access roads and a railroad between Mary River base camp and the excellent potential harbour site at Milne Inlet; for the harbour, dock and ore-loading facilities at Milne Inlet; and for the power and ancillary townsite services at both Mary River and Milne Inlet.

Feasibility studies will continue until January 31, 1966, when a full report will be made. The present annual production estimate is 1,500,000 to 2,500,000 long tons of ore, grading about 68 per cent Fe. If the studies show that it is economically sound to develop the iron deposits, the ore would be shipped out with ice-breaker assistance during a twelve-week summer season. During the year application for assistance to build airstrips at Mary River and Milne Inlet on Baffin Island were received by the Department from Baffin Land Iron Mines Limited; assistance was recommended totalling \$40,000.

The Baffin Island ore deposits are the most significant of the newer mineral discoveries in the north; other properties being intensively explored are a copper deposit near Whitehorse and a lead-zinc property near Ross River in the Yukon. Studies on transportation problems were made of the large iron property in the Snake River area of the Yukon.

Exploration and claim staking increased in the Northwest Territories; the main centres of activity have been the south shore of Great Slave Lake, the Coronation Gulf and Bathurst Inlet areas and the area immediately surrounding Yellowknife. In the Yukon, exploration companies were active in the Dawson, Mount Nansen, Vangorda Creek and Keno Hill areas.



Hoar frost on rig as drilling operations continue by night at Winter Harbour, N.W.T.
on Melville Island.

The Department spent \$2,647,748.00 in the Yukon and Northwest Territories for the construction of roads to encourage development in areas of favourable resource potential. Grants were also provided to each territory to assist resource development companies in building low standard roads into promising areas. The Tote Trails program, administered by Commissioners in each territory, gave assistance to twelve companies; the total expenditure was \$63,406.82.

Gold still accounts for the highest percentage of the Northwest Territories mining dollar; lead and zinc are expected to move ahead of gold within the next two years. Silver leads in the Yukon, followed by lead and zinc.

During the year, government assistance programs for mining in the north had an active year. The Prospectors' Assistance Program which provides financial assistance up to a maximum of \$30,000 in each territory, attracted the largest number of participants since the program began in 1962.

An assaying service was provided to prospectors and exploration companies by the Yellowknife Assay Office; a subsidized assay service was also provided in the Yukon. Funds to help build low standard roads into mining properties were provided by the Tote Trail Assistance Program.

The Department's inspection services carried out safety inspections at mines, oil well drilling rigs and other industries. Training in mine rescue work and first aid were given in both territories; dust and ventilation surveys were made by departmental engineers to assist in the control of the silicosis problem in mines.

In oil and gas exploration, acreage off-shore from Canada's coasts covered by federal oil and gas permits rose to a record high of approximately 140 million acres by the end of 1964; this figure is more than three times the total (approximately 40 million acres) at the end of the previous year. The upward trend in off-shore activity continued into 1965.

The keen interest in the oil and gas possibilities of the continental shelf off Canada's coasts is a relatively new development. Off-shore geophysical exploratory work has been carried out off both the east and west coasts for the past few years; off-shore exploration is expected to move ahead to the drilling stage in the near future.

Off-shore activities are giving rise to problems that involve a number of federal agencies, and to meet the need for co-operation between these

agencies and industry, the Resources Division has undertaken a co-ordination function to ease operations as much as possible.

In the Yukon and Northwest Territories 18 exploratory wells were completed during 1964 with a total footage drilled in excess of 113 thousand feet — an all-time record high. Three of the new wells were completed as gas discoveries: one is located in the southwestern part of the Northwest Territories close to the Northwest Territories-British Columbia border; another in the north central part of the Yukon in the Eagle Plain; and a third in the southwestern part of the Yukon in the Beaver River area.

Exploratory activity in the territories is expected to continue on its upward trend into 1965, with increasing emphasis on areas in the northern part of the mainland.

Land

In the Yukon Territory, the disposal of land, with responsibility and administration at the local level continues to work well. During the year, the assignment of leases and agreements of sale registered amounted to 27, a slight increase over the previous year.

In the townsite of Watson Lake, extensive replanning and additions to the townsite will provide several weeks' work for the field survey party during the summer of 1965. Whitehorse and Beaver Creek were the other main centres of public interest.

A firm of surveyors has been established in Whitehorse; the number of surveys previously carried out for this Department by Mines and Technical Surveys has been substantially reduced. The transfer of responsibility for the maintenance of the Alaska Highway system from National Defence to Public Works made a considerable number of changes in the parcels of land reserved in connection with the maintenance of the highway.

During the year, 14 parcels of land were purchased or otherwise acquired by the Department.

Revenue from the administration of lands from the territory totalled \$59,762.19 of which \$31,278.70 is accounted for in this report; the balance (\$28,483.49) represents revenue from lots sold by the government of the Yukon Territory in the subdivisions under its management and control.

The trend of Yukon land use is shown by the following breakdown of the various types of leases in force:

Agricultural	13
Commercial	106
Quarrying	5
Recreational	2
Religious and Educational	13
Residential	256
Grazing	49
Licences	5
	<hr/>
	449

As yet no degree of decentralization in land administration has been achieved in the Northwest Territories. Applications for the lease or purchase of land are considered and all necessary papers are prepared in the Resources Division, Ottawa.

In the new Hay River townsite, the commercial and shopping area has been relocated because of permafrost and drainage problems. The demand for residential lots has been sufficient that the town council has applied for an additional 25 acres of land; ten acres will be subdivided for residential use in 1965 and the balance will be kept by the town for future expansion. In the new area, responsibility for planning, survey, road construction and the installation of other services rests with the town authorities.

At Pine Point the townsite centre was considerably improved by re-planning the shopping and commercial area. Surveys are expected to be finished in time to permit the construction of buildings during the 1965 season.

Townsites were planned at Holman Island, Spence Bay, Whale Cove, Coral Harbour, Pond Inlet and Pangnirtung; subdivision surveys are being undertaken in 1965.

Cattle ranchers have shown interest in the possibilities of grazing in the Northwest Territories. Arrangements for a comprehensive study of spacious grass lands in the Slave River area have been made with the Department of Agriculture.

The number of leases, agreements and other land privileges in force is comparable with the previous year's figures. The breakdown of the total of 398 leases in effect indicates the following land use:

Agricultural	14
Commercial	176
Quarrying	6
Recreational	1
Religious and Educational	18
Residential	171
Gardening	12

Assignments registered during the year amounted to 17, and the total number of leasehold mortgages registered is now 51. During the year 17 parcels of land in the Northwest Territories were purchased or otherwise acquired by the Department.

Revenue from the administration of territorial lands in the Northwest Territories amounted to \$67,181.41.

Forests

Modern forest management and fire control is carried out in the Yukon by the Yukon Forest Service.

The 1964 fire season in the Yukon was the lightest on record; twenty-five fires burned a total of 480 acres. During the season, two new fire look-outs were completed and access roads were improved. The support of a Super-Cub Aircraft was added to the seven look-outs now in operation; the plane greatly improved the Yukon Forest Service detection system.

Timber production figures for the Yukon are:

Lumber	6,773,263 f.b.m.
Fuel wood	8,116 cords
Round Timber	2,045,699 linear feet
Christmas trees	450 trees
Stumpage dues	\$10,386.00

In the Northwest Territories, the 1964 fire season was one of the worst on record. The Mackenzie Forest Service, in charge of fire control in the Northwest Territories and Wood Buffalo National Park, reported 169 fires burning 470,484 acres of Crown forests.

The Mackenzie Forest Service carries out forest management programs in the Northwest Territories. Timber production figures for the Mackenzie District are:

Lumber	1,322,000 f.b.m.
Fuel wood	3,410 cords
Round timber	695,394 linear feet
Stumpage dues	\$1,362.00

Economic Development

For centuries the Eskimo people have taken their living from the natural resources of the arctic seas and barrenlands; to-day old skills are being combined with modern commercial techniques to develop the economy of the north.

At Whale Cove on the west coast of Hudson Bay, more than 30,000 pounds of whale and seal meat were brought in by Eskimo hunters and canned during the 1964 season. The food was distributed for sale in northern settlements, and the by-products were processed as dog food. Specialty foods with added seasoning (pickled muktuk, muktuk sausage and seal meatballs) were tested on southern markets with encouraging results. For the 1965 season the quota for the Whale Cove operation is 150 white whale and 1800 pounds of seal meat; plans for a permanent cannery have been approved and construction is expected to begin in 1966.

The harp seal, on its migration route close to Port Burwell, N.W.T., provided the settlement with a thriving industry. With the help of a departmental projects officer, members of the Eskimo co-operative took a record catch of 1,928 seals, using seal nets and traps. The price of sealskins is high, and the demand strong on the market. Most of the Port Burwell skins were sold to buyers; others were used by the handicraft industry to make stuffed sealskin animals, slippers and mukluks for the southern market. The seal meat was used locally. The sealing project provided both food and revenue to the community; welfare payments (except in one case of a disabled person) were unnecessary.

During the 1964 season, a new char fishing industry was established at Daly Bay, on the north west coast of Hudson Bay. Although the returns were disappointing during the first fishing season (due in part to adverse weather conditions), projects officers anticipate that the industry will become a major source of income for the Eskimo community. The quota for the Daly Bay fishery for the 1965 season is 25,000

pounds of Arctic char. The fish will be canned; 35,000 cans will be exported to markets in the south, and 3,000 held for local sale.

The cycle of the Arctic fox was at a periodic low during the year. In the Rankin Inlet area only about 800 fox pelts were traded compared to nearly 1,800 in 1963-64. Lower prices were paid for the white fox pelts — on an average of \$9.00 as compared with \$15.00 last season.

Offsetting the lower income from furs, an active arts and crafts program uncovered a latent talent for carving in soapstone among the hunters of the Central Keewatin. The Inland Eskimos had seen their livelihood diminish with the dwindling herds of caribou; their excellent carvings gave them a sense of achievement as well as financial returns.

In November, 1964, the first major exhibition of Keewatin carving was sponsored by the Winnipeg Art Gallery in the Winnipeg International Airport; the show was well reviewed by critics and established the reputations of the Baker Lake group. During 1965, an estimated \$60,000 will be earned by the community from carvings and handicrafts.

Successful arts and crafts programs were also held in Rankin Inlet, and to a lesser extent, at Whale Cove. A new form of art was developed at Rankin Inlet, where Eskimo craftsmen experimented with ceramics and pottery, fashioned from local clay.

The continuous demand for hand-made sealskin "Ookpiks" from Fort Chimo gave full employment to the nimble fingers of handicraft workers in the Arctic Quebec settlement. Royalties from the sale of Ookpik novelties — jewellery, clothing items — combined with profits from the char fishery to clear loans off the books of the Fort Chimo Co-operative Association.

A second novelty — 'Sikusi' — an ice worm fashioned from marten and fisher tails, was designed and is being produced in quantity at Tuktoyaktuk in the Western Arctic. The furry creation is being sold on the southern market, and licensing arrangements have already been signed for its commercial reproduction in several forms.

During the year a record volume of handicrafts from Eskimo co-operatives (amounting to more than \$100,000) were marketed through the craft distribution centre in Ottawa.

Twenty-one co-operative organizations in the north now produce arts and crafts and carry out programs of resource harvesting. The carvings and prints of the Cape Dorset Co-operative have achieved international recognition.

During the year a new co-operative was formed at Payne Bay in Arctic Quebec: the starting activity was an Arctic char fishery. At Fort Resolution in the Mackenzie District, a co-operative for local Métis and Indians was developed by an officer of the Co-operative Union of Canada, under contract to the Northwest Territories Council. The co-operative will make use of local timber in the area for milling purposes and carry out other co-operative and community development work.

Other programs, such as experimental trapping in the Keewatin, are being tried to improve the economy of Arctic communities. The possible development by private enterprise of the rich iron ore fields on northern Baffin Island may result in greater wage employment for Eskimo people in the area.

In the Mackenzie, more than 5,000 tourists (the number predicted for the 1964 season) flew into northern fishing camps, or travelled along the Mackenzie Highway. Increased tourist accommodation, improved highways and airfields are expected to attract even more visitors to the territories in 1965. Twenty-three new applications for land leases to build tourist lodges and related facilities are now on record. A new sports fishing lodge on Great Bear Lake was completed and is expected to begin operation in 1965. One new camp will be open for the summer of 1965 at the east end of Great Slave Lake.

During the year, big game hunting was opened to non-resident hunters in the Mackenzie Mountains; six outfitters have been licensed to conduct big game hunting parties into the region in the 1965 season.

The launching of a 104-passenger cruise boat to travel the Mackenzie River from Hay River to Inuvik has been postponed for approximately one year; the luxury cruiser "Arctic Dawn" operated by Arctic Circle Cruises Ltd., of Edmonton, is now expected to begin her tours in August 1966.

At the February 1965 session of the Council of the Northwest Territories, the Ordinance Respecting Travel, Tourist Establishment and Outdoor Recreation was passed. The ordinance and regulations were designed to control the orderly development of tourism in the Northwest Territories.

During the year, publicity and promotional tours were sponsored for writers in three areas to stimulate the interest of travellers with a sense of adventure, and a curiosity about unknown, uncrowded places.

Welfare

Social Welfare measures for Eskimos in Canada are planned and provided by the Northern Welfare Service of the Department; it has a similar responsibility to persons in the Northwest Territories who come under the jurisdiction of the Government of the Northwest Territories.

In general terms, the Service assists individuals and families — especially those who find themselves in serious financial and social difficulties. This assistance includes measures to counter special problems affecting the social and cultural development of northern groups and communities.

The programs are operated by a field staff under the direction of two District Welfare Superintendents. Professional social workers are located at six regional centres and in five other communities. In smaller centres, programs may be carried out by teachers, administrators or other officers of the Department.

Northern Canadians receive aid in the same manner and in the same amounts as other residents of Canada under federal programs such as Family Allowances, Old Age Security, Old Age Assistance, Blind and Disabled Persons Allowances. The Social Assistance program provides food, clothing and shelter for those who are in temporary financial distress. The amount of social assistance for which any person is eligible is the difference between what he can obtain from all sources (including wages, and the sale of skins and crafts) and the value of country food, and what is required to maintain himself and his dependents at a level which safeguards health and permits normal growth and development.

Children, whose parents are temporarily unable to look after them or who are neglected, are cared for through boarding homes, foster homes and Children's Receiving Homes. Small institutions are located at Frobisher Bay, Fort Smith, Yellowknife, and Churchill. Special services for unmarried mothers, the maintenance of children of unmarried mothers and adoption services are also provided.

A small home for the aged was maintained at Aklavik and services in institutions were purchased at several locations in the territories from the Anglican and Roman Catholic Churches. Care of the aged was also provided through boarding homes.

The social problems of hospital patients, and particularly of Eskimos in hospital in the south, are eased by a number of services. Communication is established between the patient and his family in the north through letters, tape-recorded messages and the CBC Northern Service. Photographs of the patient and quarterly reports from the hospital are sent to relatives, with more frequent reports in the case of serious illness. When a patient is discharged, arrangements are made to provide continuing medical attention as required; if the patient is disabled, he is cared for in a rehabilitation centre, either in the south or close to his home settlement.

Patients are returned to their families as soon as possible. Transit centres for home-coming Eskimo patients are operated at Frobisher Bay, Churchill, Fort Chimo, Yellowknife, Cambridge Bay and Inuvik; on occasion, privately-operated facilities in the provinces are used.

At Frobisher Bay, the activities of the Rehabilitation Centre were curtailed and commercial projects were discontinued; the centre at Inuvik continued to operate on a reduced scale. With development of economic programs by the Industrial Division and increased opportunities for employment in the north, the need for commercial projects under the rehabilitation program has become less. Emphasis was shifted from projects to group counselling and community activities.

Community welfare services assist Eskimo communities as a whole — or groups within these communities — to deal with local social problems such as unemployment, alcoholism, delinquency and poor housing.

During 1964-65, low-cost houses were provided for 150 Eskimo families in the Eastern Arctic and 75 families in the Mackenzie District. Approximately 1500 Eskimos cannot provide housing adequate for their families; the Department plans to build houses for these people over a five-year period. To date, about 340 welfare houses have been built; another 40 have been planned for 1965-66.

For some time, every encouragement has been given to local Eskimo Councils to play a role in community development. Without funds, the Councils have acted mainly as advisory boards to the Area Administrator. On April 1st, 1965, with the establishment of a Community Development

Fund, \$82,500 for community development was budgeted among a number of settlements in the Arctic District, and \$17,500 among similar communities in the Mackenzie District. Local Eskimo Councils will move forward from their advisory role to take a dominant part in deciding how the money should be used to relieve the problems of their community life.

The total cost of any project must be at least 80 per cent labour cost. Among the projects for the physical improvement of the settlement are water and sewage services, the construction of natural (permafrost) refrigerators, dog pounds, trail cabins and bridges. Economic development projects initiated locally include soapstone mining, fishing and the manufacture of fur tumble drums. The field staff agree that the program has been extremely valuable in stimulating community initiative.

In the Linguistics Services of the Welfare Division, the Eskimo language course was in its second year of preparation and sufficiently advanced to be used for the instruction of new Northern Service Officers. During the year 125 hours of instruction were given by the Welfare Division staff.

An Eskimo dictionary and a grammar, written in the new orthography of the Eskimo language, were also in preparation. The orthography is a scientifically based method of writing the language using Roman letters. It will eventually replace the syllabic writing of the Eastern Arctic and provide a uniform written language throughout the Canadian Arctic.

The "Q-Book", an Eskimo book of information that discusses such subjects as health, education, the care of firearms, wills, banking and the preparation of food was published early in 1964. During the year under review 3,400 copies were distributed free of charge to Eskimo families in the north. The "Q-Book" was written in syllabics, English and the new orthography: many letters have been received from the north praising the publication, and commenting on its wealth of useful information.

A comprehensive corrections program has been approved in both the Northwest Territories and the Yukon. The maximum use of adult and juvenile probation service, maximum-medium security prisons, minimum security camps, juvenile detention units and after-care services will be included.

During the year a firm of architects completed plans for the medium security prisons and preparations were made to call for tenders for their

construction; each of the prisons will have a capacity for 40 inmates. Construction will be completed early in 1966.

The Yukon Territory appointed its first probation officer and the Northwest Territories Council advertised for an officer to inaugurate the service in the Northwest Territories.

Minimum security camps and units for the detention of juvenile delinquents will be established during 1965-66.

Nature and History



In August, 1964, an underwater archaeological team recovered the remains of an oak and pine bateau from Lake Huron at St. Joseph's Island. The bateau probably carried supplies into Fort Saint Joseph 150 years ago.

Historic Resources

At the beginning of summer, 1964, staff at the Fortress of Louisbourg estimated that 60,000 people would visit the site during the holiday season; at the end of September, despite unusually wet weather, the figure had passed the 100,000 mark. Visitors (at the rate of 750 a day) examined displays in the Louisbourg Museum and on a raised wooden walkway entered the ruins of the Château Saint-Louis through a door cut above the Governor's Wing. They passed through various rooms as far as the Sacristy and Chaplain's quarters on the elevated walk and watched excavation work in progress.

The attendance figures indicate the lively interest of Canadians in their historic past and in Louisbourg itself, one of the most extensive restoration programs in the world.

To all but those actually engaged in the vast and complex operation, progress must appear slow. Months of archaeological research on the site must be related to historical research carried on in libraries and archives in Canada as well as in France and England. Pieces of pottery and glass are identified; original French-cut stones (nearly 1,000 of these have been excavated to date) are photographed, studied and set aside for use in the restoration. In the archaeological laboratory priority is given to artifacts that may shed light on the original structure of the King's Bastion and the Château Saint-Louis.

During the winter and spring, excavation and reconstruction work was continued under shelter, in spite of high winds and snow. The main construction project during the year under review was the restoration of the left wall of the Fortress, looking out to sea from the King's Bastion. More than 100,000 cubic feet of masonry structure have been finished and the stone facing was pointed to give the appearance of age.

Archaeological and historical research was concentrated on the Château Saint-Louis. From reports submitted early in 1965, a construction plan for the Château is being prepared. Stone cutter trainees —

many of them former miners learning a new skill — cut sections through the existing walls of the Château Saint-Louis to remove original cut stones. This step is part of the final stage of archaeological investigation, as well as the initial stage of dismantling the foundation walls of the Château.

In the old town behind the Fortress thirteen 20th-century houses, which had been expropriated, were dismantled as a winter works program. The wood debris was hauled away and burned, but masonry products were saved for further study and glass windows were salvaged for possible use in restored buildings.

To meet the increasing public interest in Louisbourg, display and viewing sites were prepared for visitors. The glassed-in look-out points display exhibits and photographs. At Kennington Cove several miles down the coast from the Fortress, the viewing centre holds a three-panel woodcut illustrating the first siege of Louisbourg and a four-panel woodcut of the 1758 assault. In the Royal Battery Information Centre a panel illustrates and describes the history of the Royal Battery; the King's Bastion Centre mounts a model of the King's Bastion directly in line with the panoramic view of the escarpment wall outside. The progress of the restoration program is illustrated with a model of buildings and fortifications in the Park Headquarters Information Centre.

Arrangements have been made to use the West Louisbourg School as a temporary visitor reception centre during the summer of 1965. Displays and photographs will be moved in when the school is vacated in June.

Louisbourg is an outstanding example of the massive research programs that must be completed to lay the foundation for the authentic and lively presentation of Canadian history at historic spots. Background knowledge, clarified by visual displays and illustrations greatly enhances the value of historic restorations; with this concept in mind the Canadian Historic Sites Division is reorganizing its extensive museum program.

At Lower Fort Garry, north of Winnipeg, a modern fire-proof museum with air-conditioning, humidity control, fumigating room and work shop was completed inside a replica of the original façade of an 1874 Hudson's Bay Company trading store (frame sheeting over poured concrete). Exhibits on the ground floor of the museum tell the story of the early fort which was built by the Hudson's Bay Company about 1832. It served as winter headquarters for part of the first detachment

of the North West Mounted Police. The first treaty between western Indian tribes and the Canadian government was signed at the fort in 1871.

On the second floor of the museum the best items of a very fine ethnological collection will be on display. The exhibit will illustrate the cultures of Indian tribes who lived in the northern territory served by the early Hudson's Bay Company — an area extending from Hudson Bay to the Pacific Ocean.

In all, the Canadian Historic Sites Division maintains twenty museums. The completely modern museum at Lower Fort Garry is the first step in an extensive program to revitalize museum facilities.

A vast collection of items — ranging from cannons to coal scuttles — is being catalogued in detail for use in museum exhibits or restored buildings. More than 1,200 period items of military and civilian origin were acquired during the year.

The program of archaeological research is also expanding. To meet the growing need for trained archaeologists a summer field school for university students was held at Fort Lennox at Ile-aux-Noix in the Richelieu River. Ten students participated in this learn-while-you-work excavation program.

The summer work at Fort Lennox resulted in the complete excavation of an 1814 garrison hospital, an 1816 cookhouse and an 1823 gun shed. Excavation work on an 1814 barracks and bakehouse were almost completed. The site yielded a rich collection of artifacts (piled in a row 35 feet long and 6 feet high) for future cataloguing and study.

On an experimental basis, a Gheom resistivity meter, a proton magnetometer and a number of other instruments used to detect subterranean features, were tried at Fort Lennox and proved successful in locating the stone walls of the early British fort (c.1780) beneath the visible ruins of the later structure. One corner of this earlier fort was uncovered during the working season.

At Fort Saint-Joseph near Sault Ste-Marie, an underwater search party from the Division, assisted by a team from the University of Toronto, made a valuable discovery in bringing to the surface parts of a flat-bottomed "bateau"; the original "bateau" had probably carried supplies to the old fort 150 years ago.

On the basis of the 1964 field season, underwater research and surveys with electronic equipment will be continued in 1965. Plans in-

clude the use of the resistivity meter for locating underground ruins at Signal Hill National Historic Park in St. John's, Newfoundland and at Placentia in Newfoundland.

On the Pacific Coast, the R.C.M.P. schooner "St. Roch" will be restored under an agreement between the federal government and the city of Vancouver. The "St. Roch" was the first vessel to navigate the Northwest Passage from west to east. The historic voyage was made in 27½ months under the late Superintendent Henry A. Larsen in 1940-42. The city of Vancouver acquired the "St. Roch" in 1954, and under the agreement will build a shelter to house the vessel. The Division will be responsible for the restoration program; marine specialists have been retained to assist with the complicated technical aspects of the work.

At Sault Ste Marie, Ermatinger House — one of the oldest stone houses in Ontario — will be restored to its original condition by the city of Sault Ste Marie as part of an agreement entered into by the Department and the city of Sault Ste Marie in 1964. The house was built between 1815 and 1820 by Charles Ermatinger, an independent fur-trader; it will be used by the city as a museum.

During the year the Department was also negotiating with the province of British Columbia in connection with Craigflower Manor in Victoria, and two early fur-trading buildings built in the 1860's by the Hudson's Bay Company at Fort St. James near Stewart Lake.

In all cases, restoration of the historic buildings has been recommended by the Historic Sites and Monuments Board of Canada.

The Parks

From the flower-carpeted Alpine meadows of Mount Revelstoke in British Columbia to the picturesque sea-coast of Newfoundland, areas of scenic beauty and natural wonders are being preserved for all time in the National Parks of Canada.

The dual responsibility of parks administrators and planners is to provide facilities for the increasing enjoyment and use of park lands and at the same time to protect irreplaceable nature features for future generations.

For the first time in twenty years visitor attendance at the parks showed signs of levelling off during the year under review. The decline of 2.6 per cent in the total figure was mainly the result of lower attendance at parks along the Trans-Canada Highway through the Canadian Rockies and Selkirks and in Point Pelee National Park in Ontario. While cool rainy weather no doubt affected the number of visitors, travel on the Trans-Canada Highway through the Rogers Pass may have temporarily levelled off.

Although over-all attendance was down, the number of campers in the parks was 799,180 for the period ending December 31, 1964 — an increase of 8,405 over the corresponding period in 1963. Camping under canvas or with a trailer, relaxing, enjoying the natural beauty of the parks and outdoor activities continued to be primary attractions; facilities for camping were expanded and improved in many of the eighteen national parks during the year.

Outstanding was the virtual completion of Phases 1 and 2 in Whistler's Mountain Campground in Jasper National Park. Interior roads were gravelled and graded; in the trailer park, electricity, sewer and water services were available at 78 sites and in the camp area tent floors and wood-burning outdoor fireplaces were ready for use at 67 sites. When the development is complete a total of 629 sites for trailers and tents will be available.

On Rustico Island in Prince Edward Island National Park a 148-site campground, serviced by water and sewer systems was opened for

the first time in the summer season, 1964. In Fundy, roads were laid out, a water reservoir completed and camping pads built in the new Chignecto camp for use in 1965. Over 80 per cent of the necessary clearing was finished for a new campground at Black Brook in Cape Breton Highlands Park.

In Western Canada, a combination tent and trailer campground comprising 183 units was completed at Lake Louise in Banff National Park (except for some of the campground buildings which will be built in the summer of 1965) and used for the first time during the holiday season, 1964. Each pad accommodates a tent or a trailer up to 20 feet in length. An extension to the Two-Jack Lake Campground in Banff Park was also partially completed.

Skiing facilities at Banff were improved to encourage more visitors to come to the park for outdoor recreation on a year-round basis. Two new T-bar lifts were opened by private operators — one at Mount Norquay and the other at Sunshine Lodge. At Jasper a T-bar lift was built in the Marmot basin and improvements were made to the skiing areas in Mount Revelstoke and Riding Mountain Parks.

The objective of park policy is to encourage winter use of the parks without detriment to the prime scenic values. This policy permits good quality skiing developments on the basis of close co-operation between government and private enterprise. Generally the maximum development of selected areas is encouraged as more desirable and efficient than a multiplicity of sites.

As a general rule major skiing developments will be located near key access points and close to established or planned visitor service centres. The development of suitable sites requires over-all planning for maximum efficiency and team work between the Department and private enterprise.

The long-range plans for the spacious western parks is to establish visitor services centres in areas of heavy use rather than services scattered at random along main routes of park trails. Like urban shopping centres, services will be grouped to include such amenities as a motel, restaurant, gas station, general store, coffee shop and camp area. In Banff the development of the Lower Lake Louise Visitor Services Centre was well under way during the year. The installation of water and sewer facilities was almost completed; the area was serviced with electric power. Redevelopment plans for Jasper Townsite in Jasper National Park and Waskesiu Townsite in Prince Albert National Park were also prepared by consultants.

Beyond the service areas, spacious wilderness zones will remain undeveloped. Campers who find recreation on solitary mountain trails will hike on foot and spend the night in primitive shelters. The zoning concept will keep scenic wilderness areas virtually unchanged for the enjoyment of future generations. The safeguarding of natural wonders within the parks also depends on the understanding and recognition of irreplaceable natural features.

During the year a contract was let for the reconstruction of the Mount Revelstoke motor road with the work phased over a two-year period. In order to expedite the work and because provision of detours is virtually impossible, the road will be closed to the public during the period of reconstruction. On completion of the road the summit area will be developed for day-use activities with the emphasis on nature interpretation. Visitors will be told about the vulnerable nature of the alpine meadows, formed over the centuries from dead organic matter. The network of peaty organic terrain can easily be broken by a hiker's path, exposing the fibrous soil to further damage from water and wind erosion.

In Atlantic coastal parks and particularly Cape Breton Highlands an interesting natural feature is the "barachois" beaches. Rounded stones tossed on shore by waves and ice have developed a growth of moss and lichens several centuries old. The pioneer vegetation of plants colonizing on a barren area provides an unusual opportunity to study conditions that have evolved in a relatively short time.

At Point Pelee — a triangular sandspit shaped by the water currents in Lake Erie — a vital nature feature is the transition zone between forest and beach. The area supports a wealth of plant life of both forest and beach origin which acts as a stabilizing influence to maintain the sandspit against wind and wave action.

At Glacier National Park a reconnaissance survey was undertaken preparatory to estimating the cost of making the Nakimu Caves available for visitors. The caves stretch for half a mile into Cougar Mountain. An underground waterfall pours across a rocky ledge, and moon milk — a stalactite deposit — glows on areas of the cavern walls. The caves are the largest in Canada and vary in size from spacious caverns 75 feet high to a low confined passage known as "Fat Man's Misery".

The management of park resources includes that of wildlife native to the area. Wide-ranging Wood Buffalo National Park — an area of 17,300 square miles straddling the border of the Northwest Territories and the Province of Alberta — is the habitat of two species of wildlife

now in danger of extinction. The whooping crane, whose only known wild nesting ground is the park, has been on the borderline of survival for half a century. In recent years a serious outbreak of anthrax threatens the herds of wood buffalo. Selected healthy animals will be moved out of the area to Elk Island National Park as breeding stock to preserve the herd.

To make a serious study of park lands, their evolution, nature features and wildlife, an intensified program of research and interpretation has been under discussion. High priority on the program would go to the appointment of permanent naturalists to live in parks all the year. Their observations and studies would provide information on wildlife as well as on park history and the evolution and preservation of nature features.

In summer months permanent naturalists would be assisted by seasonal naturalists in interpreting the nature of the park to visitors. Exhibits at nature centres will show how the physical features of the parks were formed and explain why certain plants and animals are found there and how they live together in natural balance. Plans for the first nature centre have been approved for Point Pelee National Park. An understanding and appreciation of nature would appear to be the key both to present enjoyment and conservation for future generations.

Arrangements were made for the transfer by Nova Scotia to Canada of an area of 140 square miles of lake, river and forest country surrounding Kejimikujik Lake in the south-western part of the province for the purposes of a new national park. The Department carried out a survey of possible park activities and a preliminary long-range development plan was prepared and approved. As a result, a three-year program is now under way designed to provide basic facilities for visitors and for operation and maintenance by the summer of 1967 when it is planned to formally open the park to the public. This three-year program will involve an expenditure of about four million dollars.

Park planners are concerned that the national parks system still does not include outstanding examples of a number of the major regions of Canada. One notable gap is a park, representative of the prairie land of the west. An agreement was reached with the Government of Saskatchewan providing for a joint investigation of several possible sites. Similar co-operative surveys to designate possible sites for new national parks were carried out in two other provinces; additional surveys will be made as provincial governments express an interest.

Wildlife

By 1970, the program to maintain wetlands for waterfowl should be the major item in the budget of the Canadian Wildlife Service.

The problem of retaining waterfowl habitat is critical. About 70 per cent of the continent's most hunted ducks nest and raise their young on the marshes, sloughs and potholes of the Canadian prairies. Seasons of natural drought are difficult enough for waterfowl; the permanent drainage of vital wetlands for agricultural, industrial, or residential purposes would drastically reduce this valuable resource. The solution is to see that wetlands in their natural state are of economic value to their owners. About 4 million acres of land that holds water even in years of drought should be preserved.

For two years the Wildlife Service has worked on a pilot project to lease wetlands from prairie farmers. During the initial stages of the program, a number of farmers in each of the three prairie provinces were approached and in about 75 per cent of the cases they agreed to sign a wetlands agreement. The contracts deal with quarter sections; the landowner guarantees not to drain, fill, or burn vegetation around his wetlands for twenty years in return for cash payments based on the value of the surrounding land.

At the end of the year under review, the program was still on an exploratory basis and involved about 50 agreements. Methods of dealing with the different land tenure systems in each of the three prairie provinces had to be worked out, staff requirements estimated and techniques developed to measure the extent and value of the wetlands involved. The next step in the program will be to determine administrative costs. During the summer of 1965, field staff will record the time and cost to negotiate agreements with a cross-section of prairie landowners.

Ducks in agricultural lands sometimes cause serious damage to grain crops, cutting back the margin of profit. Much has been done to develop

techniques to reduce these losses. Wildlife officials will continue to work closely with landowners, informing them of up-to-date methods of crop protection.

Leases and contracts will not be the only means of preserving wetlands. Some wetlands may be purchased if this seems the only effective way of preserving large areas of which a number of landowners each owns a part. This phase of the program will be more important in areas other than the prairie provinces.

A second major study is of the impact of biocides on wildlife. In the summer of 1964 the Canadian Wildlife Service carried out the first phase of an investigation of the effect on wildlife of spray operations against the spruce budworm in New Brunswick.

Although the organic phosphate spray used, phosphamidon, was only 1/250 as toxic to fish as was DDT, it was found to have serious effects on the bird populations. During the summer of 1965, spraying will be done on an experimental basis, using ten different patterns, varying the concentrations of the biocide and the times of day that sprays are applied. A supplementary penetrant will also be used. From the results, a format will be developed for all subsequent investigations of forest spray-wildlife problems.

The use of dieldrin for grasshopper control in the Prairie Provinces has been largely discontinued, but the possible effects on waterfowl of residues from its previous use are being investigated.

In 1964, facilities became available to determine biocide residues in wildlife tissues, and early in 1965 a start was made on monitoring wildlife species for pesticide residues on a nation-wide scale. The Canadian Wildlife Service's National Registry of Pesticide Residues in Wildlife Tissues now contains the results of nearly 2,000 analyses of pesticide residues in fish and wildlife tissues received from university research councils and other government agencies.

The reduction of the bird hazard at airports has continued to be an important challenge. The Canadian Wildlife Service directs the biological aspects of the program; the co-ordinating agency, with the Department of Transport and major airlines, is the National Research Council.

The situation is urgent. Bird strikes can mean the loss of human life — although they have not caused casualties in Canada — and damage counted in millions of dollars; a large bird sucked into a \$200,000 jet engine can reduce it to scrap.

The most effective long-term solution is to make airports as unattractive as possible to problem species. During 1964, garbage dumps at several major airports were covered over; trees, hedges and shrubs were cleared away; ditches were cleaned and ponds drained. Control of grass height is important. If it is too long it will provide cover for field mice or rabbits, which in turn would attract owls and hawks; if it is too short it makes an attractive resting place for gulls and waders.

Tape-recorded bird distress calls played over a loudspeaker system at airport runways have moved starlings and some species of gulls; ducks do not always react to the recorded calls. Exploding shotgun shells, flares, and revolving searchlights used by a wildlife officer on constant duty have proved most effective. At Vancouver International Airport some 200 owls were trapped along the runways during the summer of 1964.

The study of the bird hazard to aircraft has expanded to include the tracing of bird movements on radar screens. Major bird migrations are being studied so that pilots can be warned of the location movement of large flights of geese, cranes or swans that could cause serious damage to aircraft.

Records for the first three months of 1965 reveal that the number of bird strikes on aircraft has been significantly reduced by measures taken to date.

In the Northwest Territories, the Yukon and the National Parks, the Canadian Wildlife Service carries out research basic to the management of wildlife in those areas.

In the North, a range-wide census in 1955 revealed that barren-ground caribou herds had declined to about 279,000 animals from 672,000 in 1949. At one time the population was probably as high as two to three million animals. Studies revealed several disturbing factors; migration routes appeared to have become more nomadic and erratic — a characteristic of many declining mammal populations; the reproduction rate seemed abnormally low (from 14 per cent downward to 4 per cent in some herds); in herds subjected to heavy hunting the annual kill often exceeded the calf crop. With further losses to predators, disease and accidents, the caribou population declined rapidly.

Human kill was — and still is — a crucial factor in the decline. As recently as 1949, humans were killing 100,000 caribou annually for food for themselves and their dogs.

The Department is encouraging the use of alternate resources that will reduce the caribou kill. A stepped-up program to inform northern

hunters of the need for conservation included the preparation of an illustrated booklet in Eskimo, Chipewyan, English and French for wide distribution in the north.

A comprehensive physiological study of the barren-ground caribou is being carried out with captive animals, and a report on the effect of forest fires on caribou winter range has been published. In 1966, a second major study of the barren-ground caribou will be undertaken.

In the Keewatin and Franklin Districts field studies of Arctic fox cycles were completed. Lemming abundance was found to have a direct effect on reproduction and survival of young foxes, a fact which in turn determined trapping success the following winter.

Studies continued on mink, beaver and muskrat in the Territories, and on the mountain sheep and wapiti in the National Parks. In Fundy National Park a particular study was made of the transmission of the nematode parasite in moose, which is believed to be partly responsible for high winter mortality. Also, over-browsing has been a serious problem in parts of the Park.

A third outbreak of anthrax in bison in Wood Buffalo National Park occurred, and action was taken to control the disease.

Field studies of snipe were continued on the breeding grounds in Newfoundland and Ontario and on the wintering grounds in Louisiana. Studies of the buffle-head duck continued in Western Canada, and a study of census techniques for breeding waterfowl was concluded on Prince Edward Island.

Much time was also devoted to species of birds small in number or in danger of extinction, notably Ross' goose, the trumpeter swan and the whooping crane.

Water



A "traveller" is used to anchor a twenty-foot canoe in position while a meter reading is taken on the Yukon River near Whitehorse.

Water Resources

Fresh water is a nation's most vital resource; Canada, with only .6 per cent of the world's population, holds over one-quarter of the world's fresh surface water in her vast network of lakes and rivers. The future of Canada — the well-being of her people, the strength of her industry and the yield of her agriculture — will be measured by how wisely her water resources are managed.

For more than fifty years, the primary day-to-day responsibility of the Water Resources Branch has been the collection of information on streamflow and water levels on a national scale. This information is an essential requirement in planning the economic development of water use projects and in the solution of water problems.

Systematic streamflow and water level surveys began in the four western provinces in 1911; by 1915, 451 gauging stations were in operation. The Branch operated 1,701 stations in the fiscal year 1964-65, a reduction from the total of 1,846 stations operated by the Branch in the previous year. In the province of Quebec 159 stations, previously part of the national gauging system network, were taken over by the provincial government and a number of stations operated in connection with an extensive survey program in the Fraser River Basin in British Columbia were closed down. At the same time, there was a general expansion in the streamflow and water level survey program in other provinces.

The demands for data on fresh water resources imposed by the requirements of a growing nation are becoming more insistent. To satisfy these demands, the Branch is expanding its basic data collection and analysis facilities to an extent that will require doubling professional and support staff in the 1963-69 period. The growing need to procure water resource data in the less accessible northern areas will impose an additional burden on Branch facilities. Inevitably, the cost of operating the program will increase. In terms of the total budget for water development programs in Canada (estimated at more than \$3,000 million in

the next ten years for hydro-electric power, flood control, water conservation and irrigation) the cost of obtaining basic data is small.

A program of sediment surveys, confined initially to rivers in the Prairie Provinces, was started in 1961. In 1964, the surveys were extended to southern Ontario and in the fiscal year 1965-66 will be extended to the Lower Fraser River in British Columbia. Concern over the effects of water-borne sediment on the efficiency of operation and on the life of generating machinery, dams and other structures is the main factor behind the growth of the sediment survey program.

Processing the huge bulk of streamflow and sediment survey data is a time-consuming operation and the Branch is investigating the application of computer methods to render the process more efficient. In hydraulic and hydrologic studies also, computer methods offer the prospect of considerable savings in time. Four phases of Branch operations will be examined: the conversion of field survey data into published discharge records; machine storage of data to serve a wide range of studies; application to complex hydrologic problems and the maintenance of a hydro-metric station index.

Co-operative studies of international waterway problems involving Canada and the United States have been the responsibility of the International Joint Commission since it was established in 1912. Participation in these studies has become a major function of the Branch.

The studies which laid the foundation for the Columbia River Treaty are an example. The Treaty itself is the culmination of almost twenty years of field surveys, planning and negotiation in which Branch officers played a significant part.

Ratification of the Columbia River Treaty on September 16, 1964 opened the way for a start on a vast construction program designed to provide storage for Columbia River water in Canada. Under the terms of the Treaty, Canada received almost \$278 million from the United States in advance payment for downstream power benefits for a 30-year period. An additional \$70 million for flood control benefits resulting in the United States from the operation of the storage projects in Canada will be forthcoming when the three storage dams — Duncan, Arrow and Mica — are completed in 1973.

To ensure compliance with the terms of the Treaty by both Canada and the United States, the Columbia River Treaty Permanent Engineering Board was established in 1964. The Chairman of the Canadian Section of the four-man international board is a senior officer of the Branch.

Of the many water supply problems with which engineers in North America have been confronted, one of the most complex is the existing low-water situation in the Great Lakes. Four years of sub-normal precipitation have brought record low water levels to all the Great Lakes except Superior, resulting in substantial losses to shipping companies and resort owners.

The serious situation has prompted the governments of Canada and the United States to submit a reference to the International Joint Commission with a view to determining whether further regulation of the levels of the Great Lakes is likely to be effective in reducing extremes of low and high water.

Branch engineers have carried out a number of studies relating to fluctuations of Great Lakes levels and will participate in the complex international studies involving regulation of the almost 100,000 square miles of lake area. The studies are being carried out on behalf of the Great Lakes Levels Board, established by the International Joint Commission in December 1964.

The Government of Canada also referred the problem of low levels on the Great Lakes to the House of Commons Standing Committee on Mines, Forests and Water for study.

In November 1964, to meet an urgent public demand for information about the low-water situation in the Great Lakes, the Branch published an illustrated brochure entitled, "Great Lakes Water Levels". The brochure, which was widely distributed, served not only to provide specific information to organizations and individuals directly affected, but also to create a general awareness of the complex problems associated with low water levels.

Detailed studies of the engineering and economic aspects of developing the Nelson River (with an electric power potential of more than four million kilowatts) were continued during the year under a co-operative agreement between Canada and the Province of Manitoba. About one-half of the Nelson's potential is judged to be surplus to Manitoba's requirements for approximately twenty-five years and would be available to compete in power markets outside the province.

Hydro-electric power has long been the mainstay of Canada's power economy and despite the growing emphasis on thermally-produced power, hydro-electric energy will continue to make a substantial contribution. Most of Canada's readily accessible hydro sites have been developed; advances in techniques of long-distance transmission of electrical energy

have made it possible to tap new sources of power at sites once considered remote. The Government of Canada is co-operating with the provinces in a study of the problems associated with long-distance power transmission with particular reference to the physical and economic possibilities of establishing a national power grid.

The Canada Water Conservation Assistance Act provides a statutory basis for assistance to the provinces in the construction of works of a major character for water conservation and control. Three projects, all of them in Ontario, are being built with federal government financial assistance under the terms of the Act. In addition, three applications for assistance from British Columbia are being considered.

Construction of the Greater Winnipeg Floodway went ahead on schedule during the year under the authority of the Greater Winnipeg Floodway Advisory Board. The Board was established in 1960 to supervise the planning and construction of the floodway designed to help protect the Greater Winnipeg area from the ravages of recurring floods on the Red River. The Advisory Board has representation from the Province of Manitoba and from the federal Departments of Agriculture and Northern Affairs and National Resources.

Water management problems are not unique to any one geographical area nor are they a recent manifestation. Human history is marked by man's efforts to ensure for himself an adequate supply of fresh water — a growing world population adds urgency to these efforts. In a concerted attempt to preserve this most precious of all resources, more than fifty nations have joined in an ambitious ten-year study to fill in the many gaps in man's knowledge of the science of water.

This far-reaching program of investigation, endorsed by the United Nations Educational, Scientific and Cultural Organization (UNESCO), began on January 1, 1965 as the "International Hydrologic Decade".

Because of its range of hydrologic environments — from arctic to temperate and from humid to semi-arid — Canada is in a unique position to contribute to world knowledge in this field and Canadian hydrologists and engineers will play an important part in the International Hydrologic Decade.

The Canadian studies will be co-ordinated by a National Committee, sponsored by National Research Council, with representatives from every province in Canada. The Permanent Secretary of the Committee is a senior officer of the Water Resources Branch.

Among the 169 projects being sponsored co-operatively by federal and provincial agencies and by universities will be studies of surface runoff, water quality, soil moisture, groundwater, lakes, snow, ice, glaciers (an important part of Canada's stored water) and the influence of man's activities on the hydrologic cycle.

In June 1965, an international symposium on "Network Design" to be held in Canada will offer an opportunity to discuss hydrometric and meteorological data recording networks. A second venture of international scope will be the production of the film, "Water as an element of international co-operation", undertaken by the National Film Board of Canada in co-operation with UNESCO.

Central Services

Central Services

Following the report of the Royal Commission on Government Organization (the Glassco Commission), the Department explored the possibility of using more fully the management concepts recommended by the Commission.

The report outlined major areas for improvement throughout the government; it became evident at an early stage that the problem of first importance was an analysis of how well the Department had been managing its personnel, financial and materiel resources.

In December 1963, a comprehensive study was begun by a firm of management consultants in co-operation with the Department's Management Services Division and officers seconded from other federal government agencies. This study was completed in June 1964. As a result, weaknesses in the present organization for personnel, financial and materiel management were identified. A list of priorities for improvement was made and guidelines were drawn for departmental officers to follow in the introduction of improvements. This report was quickly endorsed by the Deputy Minister and an implementation committee was set up to steer the improvement program. The committee approved a detailed schedule, placing primary responsibility with line and service managers to pilot specific projects in their areas.

On the whole, the departmental study confirmed the theme of the Glassco Commission which called for greater delegation of responsibility, authority and, correspondingly, accountability. It also set the stage for achieving this goal. The period between receipt of the study report in June and the close of the fiscal year was one of digestion, planning and preparation for the next and difficult phase — implementation.

A number of positive actions were taken. The importance of the personnel function was recognized by splitting it off from the former

Administration Branch. The Personnel Adviser now reports direct to the Deputy Minister, or to the appropriate Assistant Deputy Minister on matters falling specifically within his sphere of responsibility. The groundwork was laid for strengthening the financial and general management function by appointment of a departmental Financial and Management Adviser (replacing the former Director of Administration). Two Branch Financial and Management Advisers were also recruited to assist in the introduction of the broad improvement program. A further development was the consolidation of the total materiel function in the central Purchasing Division (renamed "Materiel and Supply Division"). At the same time, plans were laid for decentralizing the work.

Aside from the major management study conducted in co-operation with consultants the most significant event during the year was a series of Management Improvement Conferences attended by 238 officers from Ottawa headquarters and various field offices across Canada. This was the first occasion in the Department's history when senior representatives of all Branches came together to consider general management problems. Ten five-day resident conferences were held. These were planned to ensure a common understanding by senior and middle-ranking officers of the management principles and concepts to which the Department is now committed.

Management Services

This unit was created in 1963 in accordance with a recommendation of the Royal Commission on Government Organization, to provide specialized consulting services within the Department. In the early part of 1964-65 it was engaged in the Management Improvement Study. Later it assumed the lead in developing the program and began a series of procedures studies. Two of the more important included personnel systems and mechanical equipment utilization in western parks. These studies identified potential annual savings of approximately \$500,000.

As the departmental improvement program progresses, this Division will assume a role closer to that of similar divisions in other federal departments. The aims will be to provide a specialist advisory service to managers to help them solve broad problems in organizational planning, equipment standards and utilization, systems and procedures, work measurement, work simplification, organization of manuals and forms, and records management.

Legal

The Legal Adviser and his staff are called upon to advise on activities ranging from framing new policies to executive actions in carrying out established policy. Some matters (for instance those to which the Claims Regulations apply) have by law to be referred to the Legal Adviser. On other matters the officer responsible consults the Legal Adviser or his colleagues. The Legal Adviser is the liaison officer to the Department of Justice which represents this Department in litigation. He also advises on the legal implications of departmental policy and legislation. Legal counsel is provided to the Councils of the Yukon Territory and the Northwest Territories.

The Legal Adviser or his staff represented the Department and the territorial governments at the following meetings and conferences: the Tokyo Conference of the International Law Association (the Uses of the Waters of International Rivers and on the Enforcement of Foreign Judgements); the Conference of Commissioners on the Uniformity of Legislation in Canada; the Conference of the Canadian Bar Association; a conference on Personal Property Security Law, and a seminar on International and Comparative Law.

Personnel

As a result of the Management Improvement Study, a two-fold program was undertaken by the Personnel Adviser. The first step was to decentralize the existing personnel functions to each Branch with a Personnel Administrator reporting direct to the Branch Director with functional supervision being provided by the Personnel Adviser. In his new role the Personnel Adviser provides policy direction, advice and guidance. In keeping with this change in personnel management, the former Personnel Division was re-organized and now consists of five areas of responsibility: Employee Relations and Research; Manpower Planning, Development and Training; Classification and Pay Determination; Language Training; and Personnel Administration for Central Services and Resource Development Branch.

The second step was to arrange for a study by the Management Services Division of existing personnel systems, paperwork and procedures, to streamline personnel procedures and to develop management information systems. It is expected that this study will be completed by June 1965.

Staffing

The position strength of the Department as at March 31, 1965, was as follows:

Branch	Classified Positions			Prevailing	Grand
	Ottawa	Field	Total	Rate Positions	
Departmental Admin.	214	8	222	1	223
Natural & Historic Resources	184	688	872	1777	2649
Northern Administration	352	717	1069	512	1581
Water Resources	102	171	273	4	277
	<hr/> 852	<hr/> 1584	<hr/> 2436	<hr/> 2294	<hr/> 4730

During the year there were 477 new appointments to the classified staff and 317 separations. The Department conducted 122 promotion competitions and the Civil Service Commission held 144 open competitions on behalf of the Department. The chart at Page 79 shows the growth of the Department over the period April 1, 1964, to March 31, 1965.

Manpower Planning, Development and Training

This year, training activities accounted for 37.9 man-years, an increase of 28.5 man-years over the previous year. Most of this increase is attributable to in-service training. French language training, for example, more than tripled and Branch training activities increased by some 7.5 man-years. Two hundred and thirty-eight of our managers at headquarters and in the field participated in a week-long Management Improvement Conference.

The Department implemented three pilot projects in headquarters and two in the field to test a new system of employee evaluation which includes both performance review and appraisal.

Language Training

During the 1964-65 fiscal year, the language training program was enlarged to make provision for other departments and agencies. Attendance in French language instruction was as follows: spring term, 104; fall

term, 190 (including 33 from other government departments and agencies). All of these employees attended one-hour-a-day classes with the exception of 10 departmental employees who attended a full-time intensive course conducted by the Department for a period of 10 weeks.

Instruction was carried out at three levels: beginners, intermediates and advanced students. The most modern audio-visual approach was followed in classroom instruction, supplemented by individual and group practice in the language laboratory.

In English language training no actual courses were held, but 81 different series of programs for teaching English as a second language were reviewed and evaluated. A master plan was developed for conducting English language classes in the fall of 1965.

With respect to Eskimo language training, the school aided the Northern Administration Branch in the development of teaching and language laboratory materials and supervised the operation of the language laboratory for teaching Eskimo.

Information Services

Information Services is responsible for keeping the public in touch with interesting work the Department is doing. The Division carries out its job mainly through the news media and by the production of booklets, news releases, background papers, articles and press kits.

During the 1964-65 fiscal year, Information Services received 7,000 requests for information and sent out 107,000 booklets, mimeographed articles and maps. Some 3,000 copies, in French and English, of the illustrated booklet, "The Changing Eskimo" were mailed — mainly to school children. A total of 179 press releases were issued in French and English; articles were prepared for annual editions of encyclopedias and handbooks; feature material, photographs and maps were provided to answer requests from a wide variety of sources.

As a result of the critical low water levels in the Great Lakes, an illustrated booklet and an information kit were prepared: 9,000 copies of the booklet in English and 2,500 in French were sent to news media, universities, libraries and the public.

Exhibitions of Eskimo handicrafts, artifacts and clothing were held for various groups; a Public Information Officer assisted with the presentation of the first exhibition of Keewatin carvings at the Winnipeg International Airport, in co-operation with the Winnipeg Art Gallery and Department of Transport.

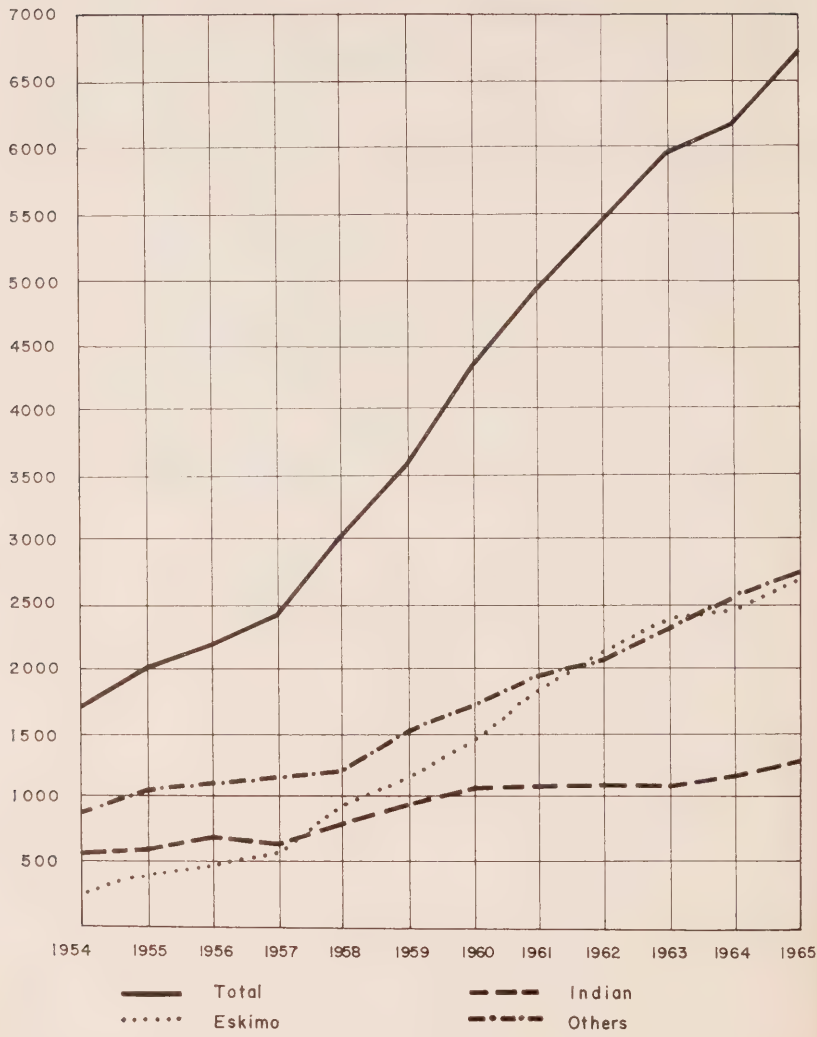
Materiel and Supply

This Division has the responsibility for purchasing and storing commodities valued at some \$13 million annually; attention here was directed to improving the return on the dollar spent. During the year, plans were made to achieve improvements through re-organization, improved policy and procedure in all elements of materiel management, greater delegation to user locations, employment of value analysis techniques and the recruitment of people possessing special skills, particularly in the field of inventory control.

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SCHOOL ENROLMENT GROWTH



**School Enrolment September 30, 1964 —
Mackenzie Education District**

School	No. Rooms	Teaching Staff	Eskimos	Indians	Others	Total
Aklavik	6	7	65	31	43	139
Cambridge Bay	3	3	60	—	13	73
Coppermine	3	3	55	—	5	60
*Discovery	1	1	—	—	14	14
Fort Franklin	6	4	—	89	—	89
Fort Good Hope	1	1	—	15	4	19
Fort Liard	1	1	—	7	4	11
Fort McPherson	11	8	3	124	43	170
Fort Norman	2	2	—	22	16	38
Fort Providence	3	3	—	48	15	63
Fort Resolution	6	6	—	34	116	150
Fort Simpson	18	19	24	182	93	299
Fort Smith	38	36	6	—	473	667
Wrigley	1	1	—	20	—	20
Gjoa Haven	2	2	30	—	—	30
Hay River	16	15	—	30	268	298
Hay River Separate	8	8	—	4	169	173
Inuvik	42	47	364	144	381	889
Jean-Marie River	1	1	—	16	—	16
Lac la Martre	1	1	—	27	—	27
Nahanni Butte	1	1	—	20	1	21
Norman Wells	2	2	—	—	24	24
Pelly Bay	1	1	18	—	—	18
*Pine Point	2	2	—	—	31	31
Reindeer Station	1	1	16	—	—	16
Snowdrift	1	1	—	31	2	33
Spence Bay	2	2	37	—	1	38
Rae	4	4	—	119	17	136
Tuktoyaktuk	7	5	110	2	8	120
*Tungsten	1	1	—	—	23	23
Yellowknife	20	24	25	57	162	244
Yellowknife (Public)	19	23	—	1	447	448
Yellowknife (Separate)	13	13	5	36	245	286
TOTALS	244	249	818	1247	2618	4683

*Company School

School Enrolment September 30, 1964 — Arctic Education District

School	No. Rooms	Teaching Staff	Eskimos	Indians	Others	Total
Baffin Island Region						
Arctic Bay	1	1	23	—	1	24
Broughton	2	2	43	—	—	43
Cape Dorset	4	4	67	—	3	70
Clyde River	2	2	52	—	—	52
Frobisher Bay	19	19	207	—	65	272
Grise Fiord	1	1	30	—	—	30
Igloolik	3	3	59	—	1	60
Lake Harbour	1	1	11	—	—	11
Padloping	1	1	20	—	—	20
Pangnirtung	4	4	70	—	1	71
Pond Inlet	3	3	54	—	1	55
Resolute Bay	1	1	29	—	1	30
Arctic Quebec Region						
Belcher Islands	1	1	15	—	—	15
Fort-Chimo	8	8	128	3	15	146
Port-Nouveau-Quebec	2	2	39	—	3	42
Poste-de-la-Baleine	9	9	128	64	7	199
Ivujivik	1	1	29	—	—	29
Koartac	1	1	16	—	—	16
Bellin	2	2	44	—	3	47
Port Burwell	1	1	20	—	1	21
Inoucdjouac	3	3	68	—	2	70
Povungnituk	5	5	122	—	1	123
Saglouc	3	3	82	—	8	90
Maricourt	2	2	44	—	—	44
Keewatin Region						
Baker Lake	5	5	102	—	4	106
Chesterfield	4	4	112	—	—	112
Churchill Vocational	9	9	105	—	—	105
Coral Harbour	3	3	46	—	—	46
Eskimo Point	4	4	90	—	—	90
Rankin Inlet	6	6	67	—	14	81
Whale Cove	2	2	32	—	6	38
TOTALS All Regions	113	113	1954	67	137	2158
Eskimos Attending Duke of Edinburgh School						85

NOTE: Of the 85 Eskimos attending Duke of Edinburgh School, 49 reside at the hostel and the remaining 36 are residents at Akudlik.

Development of Eskimo Co-operatives

	No. incorporated	No. reporting	Total Sales
1961	12	6	209,225.92
1962	14	9	370,373.57
1963	18	12	420,338.42

The difference between the number of co-operatives incorporated and the number reporting is accounted for by the fact that during the first year of operation several co-operatives had no year-end cut off. The co-operative at Povungnituk reported in 1961; no report has been made since. The 1963 total does not include a statement from the co-operative at Grise Fiord.

Revenue from Arts and Crafts*

	1959	1960	1961	1962	1963	1964
Handicrafts	—	—	—	45,000	132,000	180,000
Prints	—	20,000	40,000	40,000	58,000	142,000
Carvings	128,000	141,000	219,000	337,000	344,000	368,500

* Sales by Eskimos to local co-operatives, the Department of Northern Affairs and National Resources, and in (regard to carvings) to the Hudson's Bay Company. These figures do not include local sales to private individuals, or the sale of items produced under welfare programs.

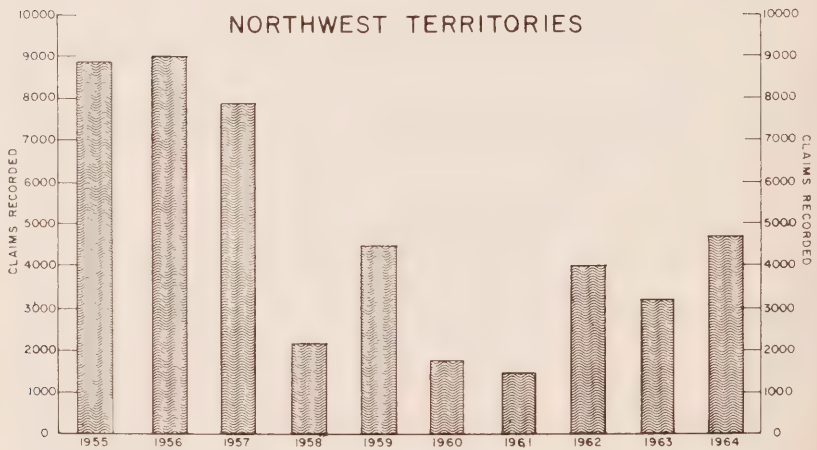
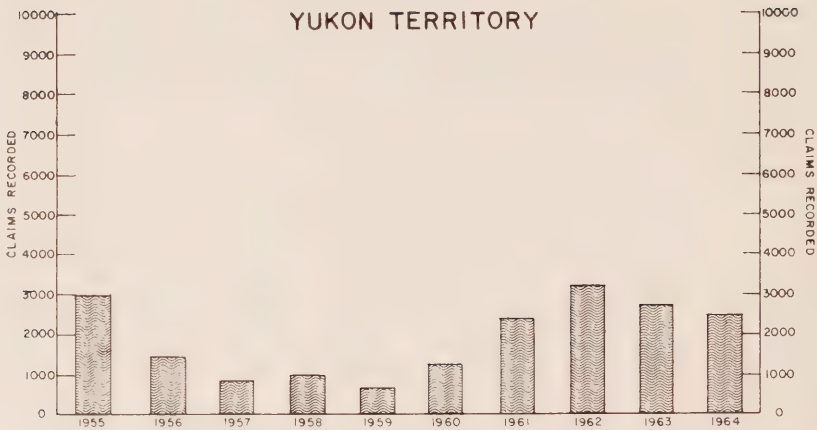
Net Value of Production of Commodity-producing Industries 1959-1962

YUKON AND NORTHWEST TERRITORIES (in thousands of dollars)

	1959	1960	1961	1962
Commercial Fisheries	703	700	675	859
Forestry	497	1,026	201	570
Trapping	876	980	1,425	1,014
Manufactured goods	652	1,325	738	1,206
Electric Power	2,707	3,172	3,487	3,614
Mining	27,980	29,310	23,954	22,201
Construction	N. Av.	N. Av.	N. Av.	N. Av.
Agriculture	N. Av.	N. Av.	N. Av.	N. Av.

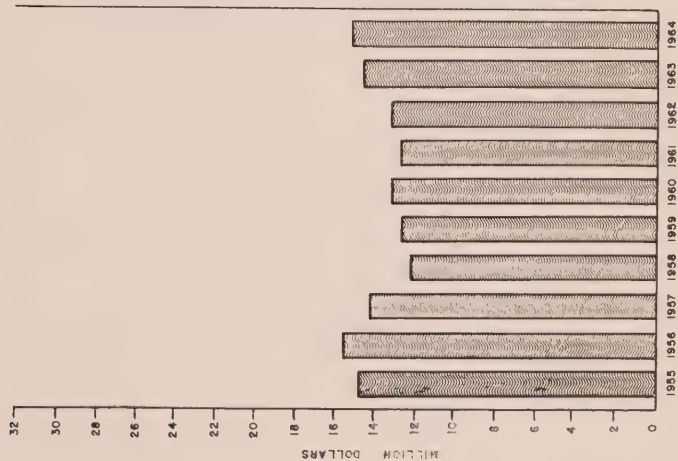
SOURCE: Dominion Bureau of Statistics, "Survey of Production".

MINERAL CLAIMS RECORDED

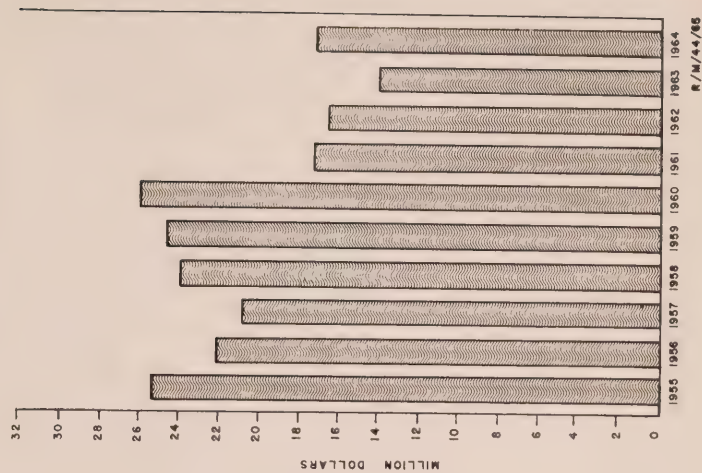


TOTAL VALUE OF MINERAL PRODUCTION

YUKON TERRITORY



NORTHWEST TERRITORIES



VALUE OF MINERALS PRODUCED

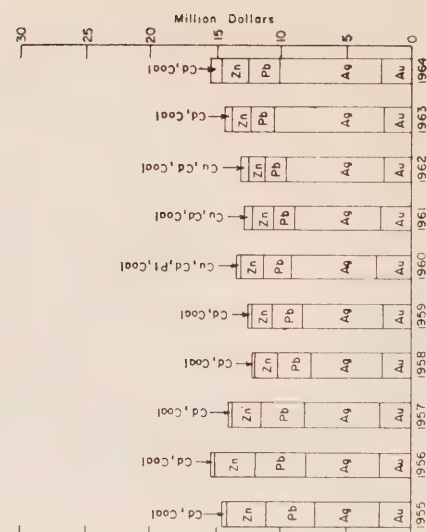
LEGEND

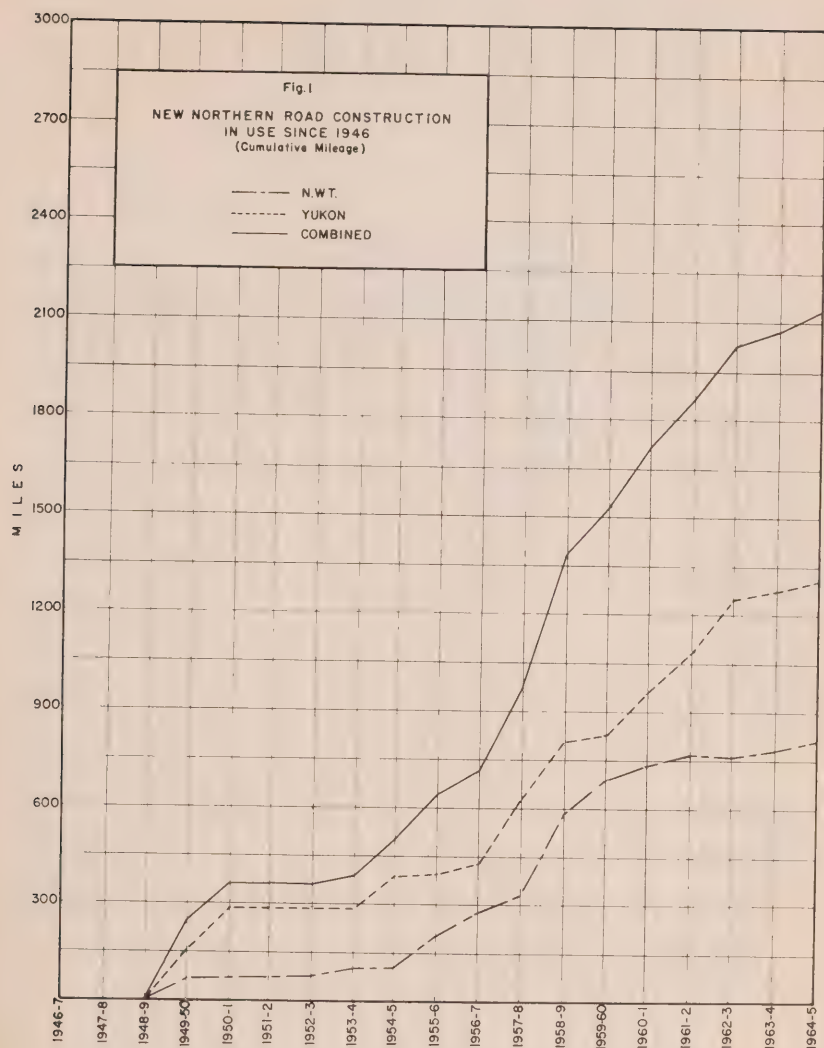
Au - Gold
 Ag - Silver
 Pb - Lead
 Zn - Zinc
 Ni - Nickel
 Pt - Pitchblende
 Cu - Copper
 Cd - Cadmium
 Pl - Platinum
 Ta - Tantalum

NORTHWEST TERRITORIES



YUKON TERRITORY

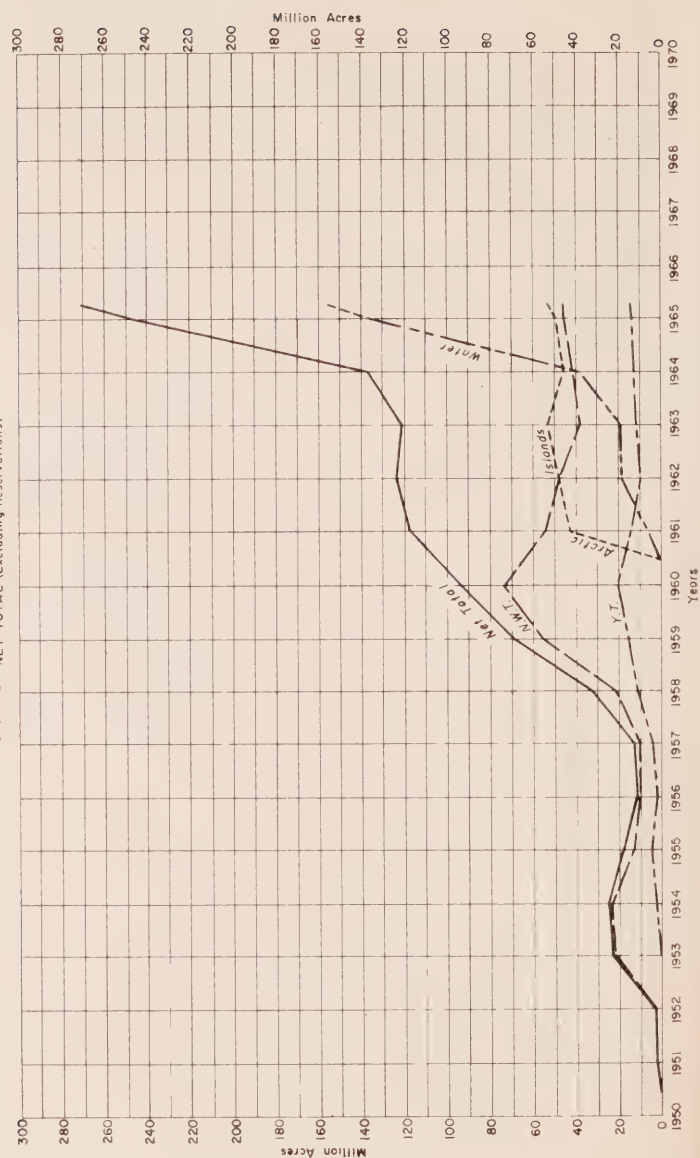




ACREAGE HELD UNDER OIL & GAS PERMIT

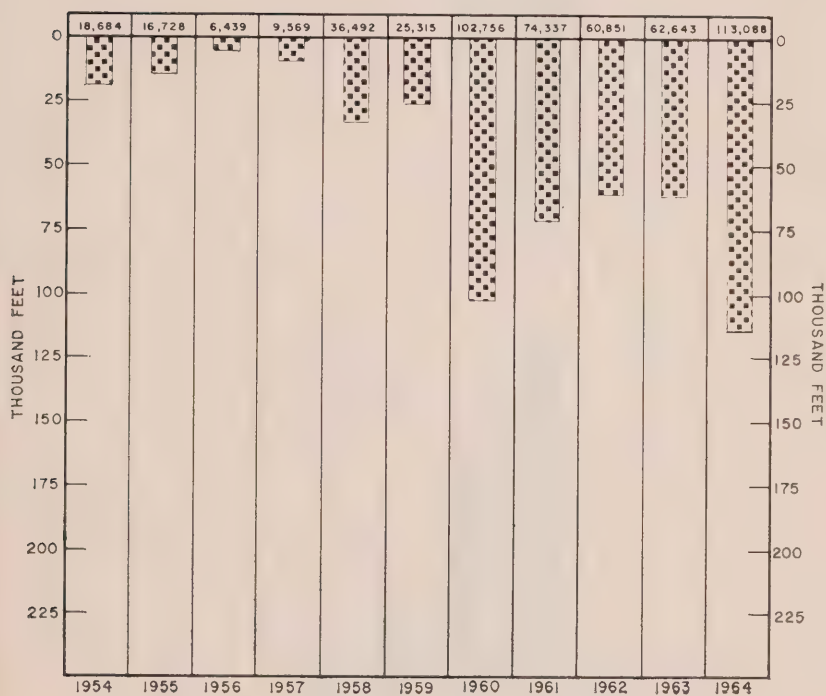
CANADA LANDS

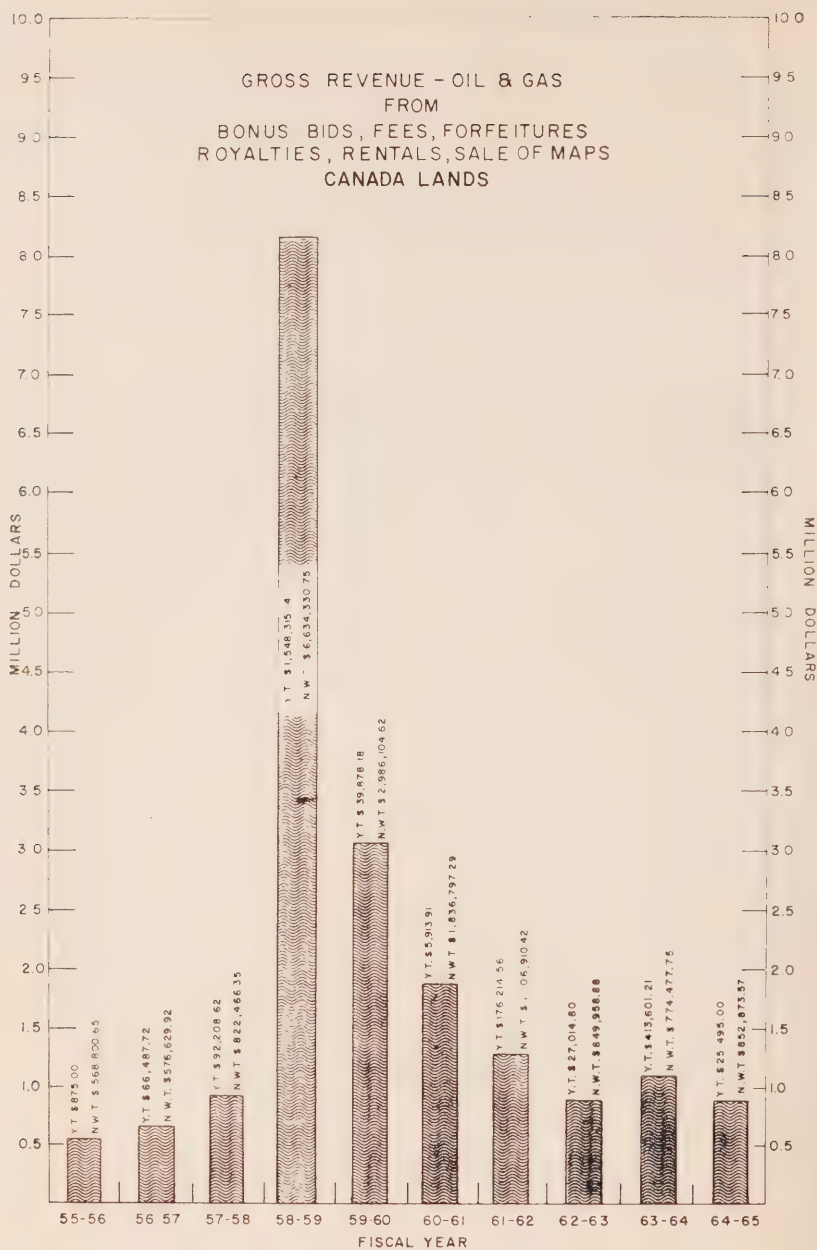
- NORTHWEST TERRITORIES PERMITS
 --- ARCTIC ISLANDS PERMITS
 --- WATER PERMITS
 --- YUKON TERRITORY PERMITS
 --- NET TOTAL (Excluding Reservations)

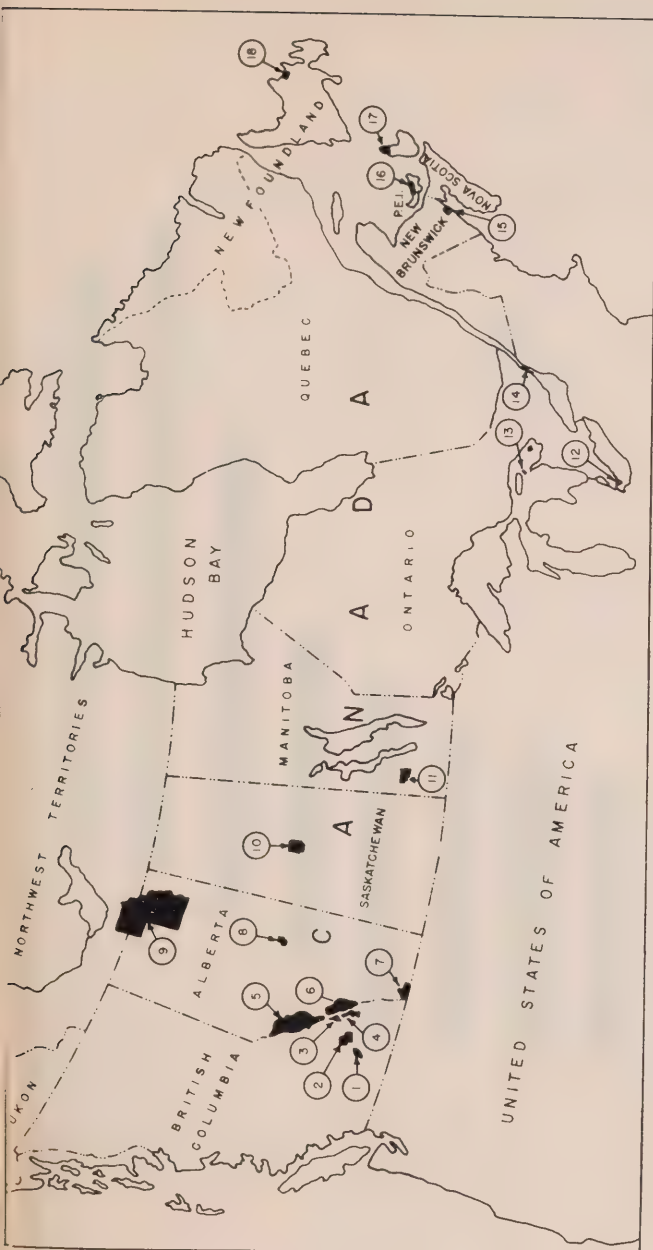


FOOTAGE DRILLED
YUKON, NORTHWEST TERRITORIES
8 ARCTIC ISLANDS

EXPLORATORY FOOTAGE

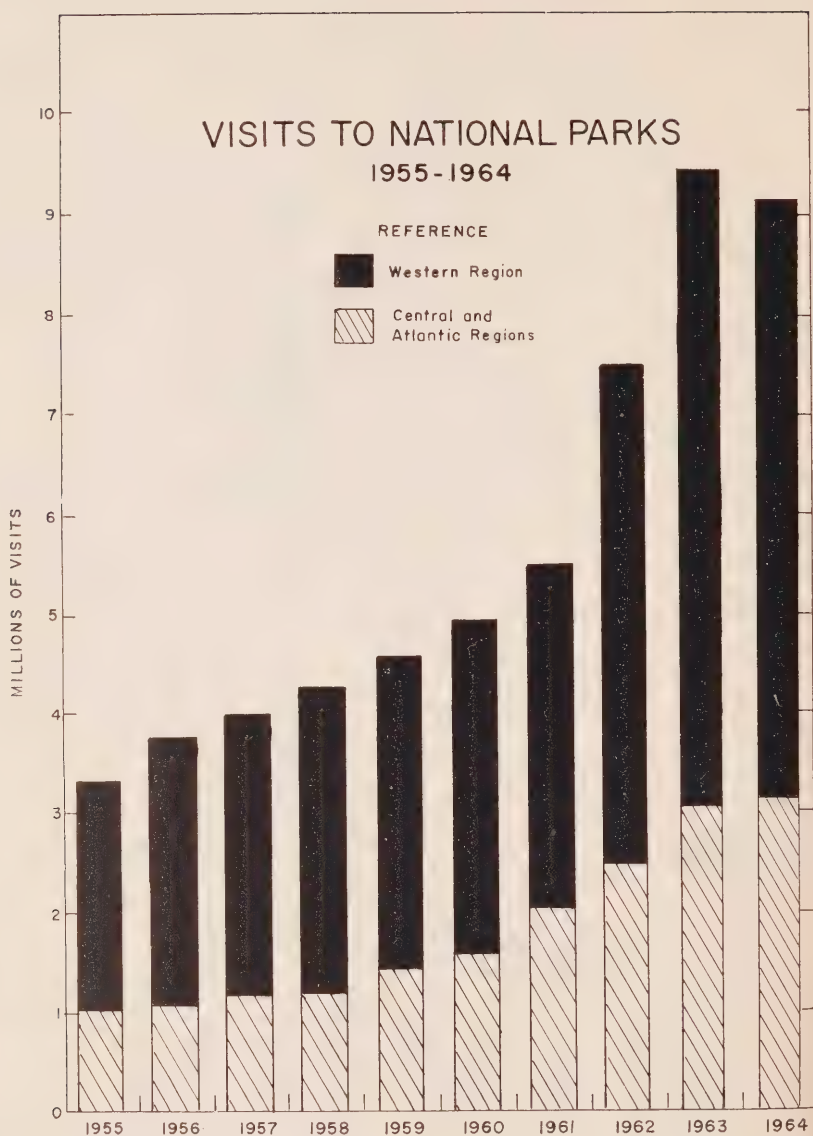






THE NATIONAL PARKS OF CANADA

1. Mount Revelstoke (1914)	100 sq. mi.	7. Waterton Lakes (1895)	203 sq. mi.	13. Georgian Bay Islands (1929)	5.4 sq. mi.
2. Glacier (1886)	521 "	8. Elk Island (1913)	75 "	14. St. Lawrence Islands (1914)	260 acres (.4 sq. mi.)
3. Yoho (1886)	507 "	9. Wood Buffalo (1922)	17,300 "	15. Fundy (1948)	79.5 sq. mi.
4. Kootenay (1920)	543 "	10. Prince Albert (1927)	1,496 "	16. Prince Edward Island (1937)	7 "
5. Jasper (1907)	4,200 "	11. Riding Mountain (1929)	1,148 "	17. Cape Breton Highlands (1936)	367 "
6. Banff (1885)	2,564 "	12. Point Pelee (1918)	6 "	18. Terra Nova (1957)	153 "



Comparative Statement of Visitors to the National Parks for the period April 1 to March 31

National Parks	1964-65	1963-64	Increase or Decrease	%
Banff	1,605,784	1,650,257	— 44,473	— 2.69
Cape Breton Highlands	624,942	615,133	+ 9,809	+ 1.59
Elk Island	175,105	207,914	— 32,809	— 15.78
Fundy	566,443	494,157	+ 72,286	+ 14.62
Georgian Bay Islands	8,371	18,052	— 9,681	— 53.62
Glacier	705,150	752,512	— 47,362	— 6.29
Jasper	480,102	468,579	+ 11,523	+ 2.45
Kootenay	548,515	567,291	— 18,776	— 3.30
Mount Revelstoke	706,015	768,417	— 62,402	— 8.12
Point Pelee	661,166	780,795	— 119,629	— 15.32
Prince Albert	140,521	137,494	+ 3,027	+ 2.20
Prince Edward Island	1,112,536	1,019,104	+ 93,432	+ 9.16
Riding Mountain	681,313	693,316	— 12,003	— 1.73
St. Lawrence Islands	67,109	77,368	— 10,259	— 13.26
Terra Nova	66,180	55,926	+ 10,254	+ 18.33
Waterton Lakes	371,258	441,803	— 70,545	— 15.96
Yoho	658,518	678,739	— 20,221	— 2.97
TOTAL	9,179,028	9,426,857	—247,829	— 2.62

Comparative Statement of Visitors to the National Historic Parks and Major Historic Sites for period April 1 to March 31

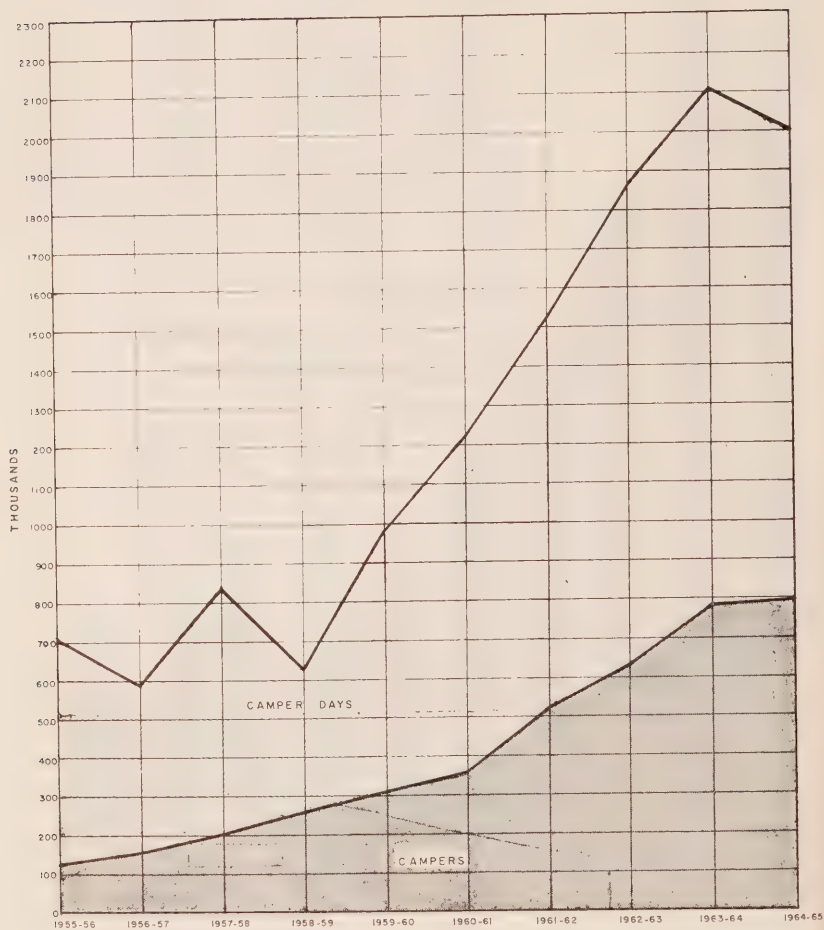
	1964-65	1963-64	Increase or Decrease	%
Alexander G. Bell	106,228	91,392	+ 14,836	+ 16.23
Batoche Rectory	7,855	7,069	+ 786	+ 11.11
Fort Amherst	9,513	3,851	+ 5,662	+ 147.02
Fort Anne	64,551	77,201	— 12,650	— 16.38
Fort Battleford	38,825	34,807	+ 4,018	+ 11.54
Fort Beausejour	49,427	43,346	+ 6,081	+ 14.02
Fort Chambly	91,493	85,569	+ 5,924	+ 6.92
Fort Langley	116,723	105,139	+ 11,584	+ 11.01
Fort Lennox	20,423	27,943	— 7,520	— 26.91
Fortress of Louisbourg	113,148	40,153	+ 72,995	+ 181.79
Fort Malden	38,916	41,023	— 2,107	— 5.13
Fort Rodd Hill	32,922	39,759	— 6,837	— 17.19
Fort Wellington	52,167	51,530	+ 637	+ 1.23
Grand Pre	64,194	63,395	+ 799	+ 1.26
Halifax Citadel	213,212	192,286	+ 20,926	+ 10.88
Lower Fort Gary	86,620	85,391	+ 1,229	+ 1.43
Martello Tower	38,893	—	+ 38,893	—
Port Royal Habitation	39,265	35,947	+ 3,318	+ 9.23
Prince of Wales Fort	424	256	+ 168	+ 65.62
Signal Hill	241,242	195,208	+ 46,034	+ 23.58
Sir W. Laurier's Birthplace	7,190	7,592	— 402	— 5.29
Woodside	11,699	12,564	— 865	— 6.88
National Historic Sites Total	1,444,930	1,241,421	+203,509	+ 16.39

SUMMARY OF TOTALS

National Parks	9,179,028	9,426,857	—247,829	— 2.62
National Historic Sites	1,444,930	1,241,421	+203,509	+ 16.39
GRAND TOTAL	10,623,958	10,668,278	— 44,320	— .41

Dated April 8, 1965.

CAMPGROUND ATTENDANCE 1955-56 TO 1964-65



Comparative Statement of Campers and Camper Days for the 1963 and 1964 Seasons

National Parks	1964 Campers	1963 Campers	Increase or Decrease	%	1964 Camper Days	1963 Camper Days	Increase or Decrease	%
Banff.....	273,296	279,191	- 5,895	- 2.11	442,673	456,500	- 13,827	- 3.02
Cape Breton Highlands.....	49,322	47,370	+ 1,952	+ 4.12	99,707	100,967	- 1,260	+ 1.24
Elk Island.....	7,305	6,692	+ 613	+ 9.16	9,163	9,224	- 61	- .66
Fundy.....	88,632	77,097	+ 11,535	+ 14.96	164,806	147,074	+ 17,732	+ 12.05
Georgian Bay Islands.....	4,921	7,870	- 2,949	- 37.47	22,449	34,828	- 12,379	- 35.54
Glacier.....	14,605	11,420	+ 3,185	+ 27.88	16,649	12,954	+ 3,695	+ 28.52
Jasper.....	103,333	100,067	+ 3,266	+ 3.26	187,044	193,655	- 5,811	- 3.00
Kootenay.....	40,457	30,228	+ 10,229	+ 33.83	71,272	49,146	+ 22,126	+ 45.02
Mount Revelstoke.....	—	2,377	- 2,377	—	—	2,790	- 2,790	—
Point Pelee.....	20,534	20,630	- 96	- .46	67,765	73,725	- 5,960	- 8.08
Prince Albert.....	25,423	26,418	- 995	- 3.76	247,734	292,265	- 44,531	- 15.23
Prince Edward Island.....	49,056	39,069	+ 9,987	+ 25.56	158,509	135,713	+ 22,796	+ 16.79
Riding Mountain.....	36,010	38,350	- 2,340	- 6.10	352,538	412,424	- 59,886	- 14.52
St. Lawrence Islands.....	4,375	5,515	- 1,140	- 20.67	11,232	13,010	- 1,778	- 13.66
Terra Nova.....	7,526	8,185	- 659	- 8.05	30,379	25,880	+ 4,499	+ 17.38
Waterton Lakes.....	31,132	48,657	- 17,525	- 36.01	55,711	88,422	- 32,711	- 36.99
Yoho.....	43,253	41,639	+ 1,614	+ 3.87	61,690	57,415	+ 4,275	+ 7.44
TOTAL.....	799,180	790,775	+ 8,405	+ 1.06	2,000,121	2,105,992	- 105,871	- 5.02

WATER RESOURCES BRANCH

LEGEND

RIVER SYSTEMS INVOLVED IN MAJOR
INVESTIGATION AND STUDY ASSIGNMENTS
DURING FISCAL YEAR 1964-1965

△ FEDERAL

1. YUKON
2. MACKENZIE
3. PORCUPINE-PEEL-RAT
4. PEACE

○ FEDERAL - PROVINCIAL

- 5 NELSON
- 6 GREATER WINNIPEG FLOODWAY
- 7 LAKE OF THE WOODS-WINNIPEG
- 8 OTTAWA
- 9 SAINT JOHN

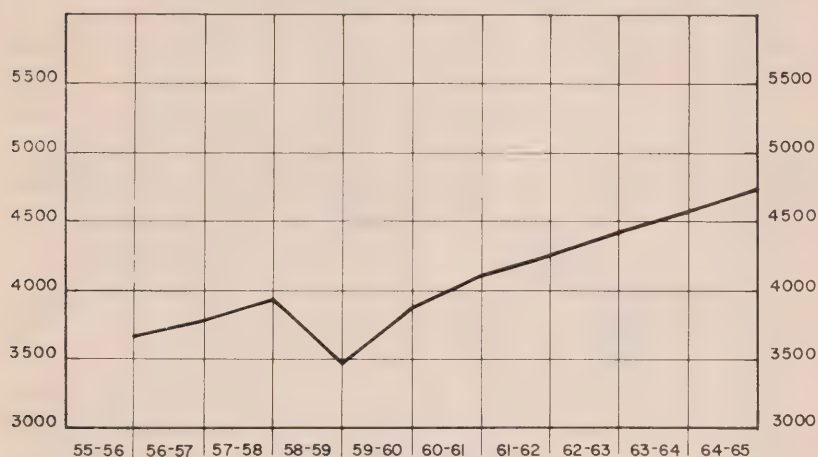
□ INTERNATIONAL

- 10 COLUMBIA
- 11 ST. MARY-MILK
12. SOURIS-RED - PEMBINA
- 13 GREAT LAKES-ST. LAWRENCE
14. ST. CROIX



CANADA
MAJOR INVESTIGATIONS AND STUDIES — 1964-1965

Staff Growth of the Existing components of the Department of Northern Affairs and National Resources (1955 to 1964).



**Summary—Man-Years of Training
Fiscal Year 1964-65**

<i>Type</i>	<i>Levels</i>			<i>Total Employees Involved</i>	<i>Total Hours</i>	<i>Man Years</i>
	<i>Senior</i>	<i>Intermediate</i>	<i>Junior</i>			
Departmental.....	162	255	392	809	52,754	27.05
Civil Service Commission....	8	33	18	59	7,176	3.68
External.....	20	60	39	119	13,986	7.17
TOTAL.....	190	348	449	987	73,916	37.90

MAN YEARS OF TRAINING

FISCAL YEAR 1964-65

MAN
YEARS

35

30

25

20

15

10

5

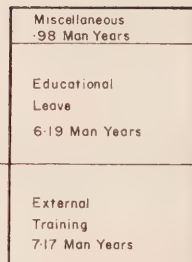
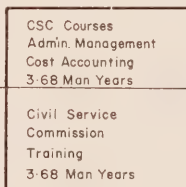
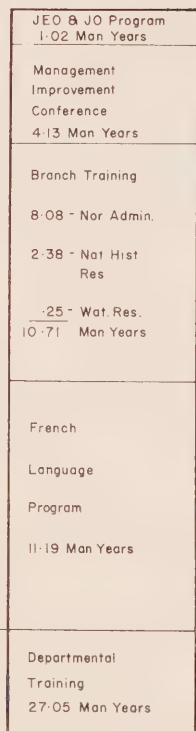
TOTALS

One Man Year = 1950 hours

Total Staff Involved - 987

Total Hours - 73,912

Man Years - 37.90

Percentage of
Classified Staff - 1.5

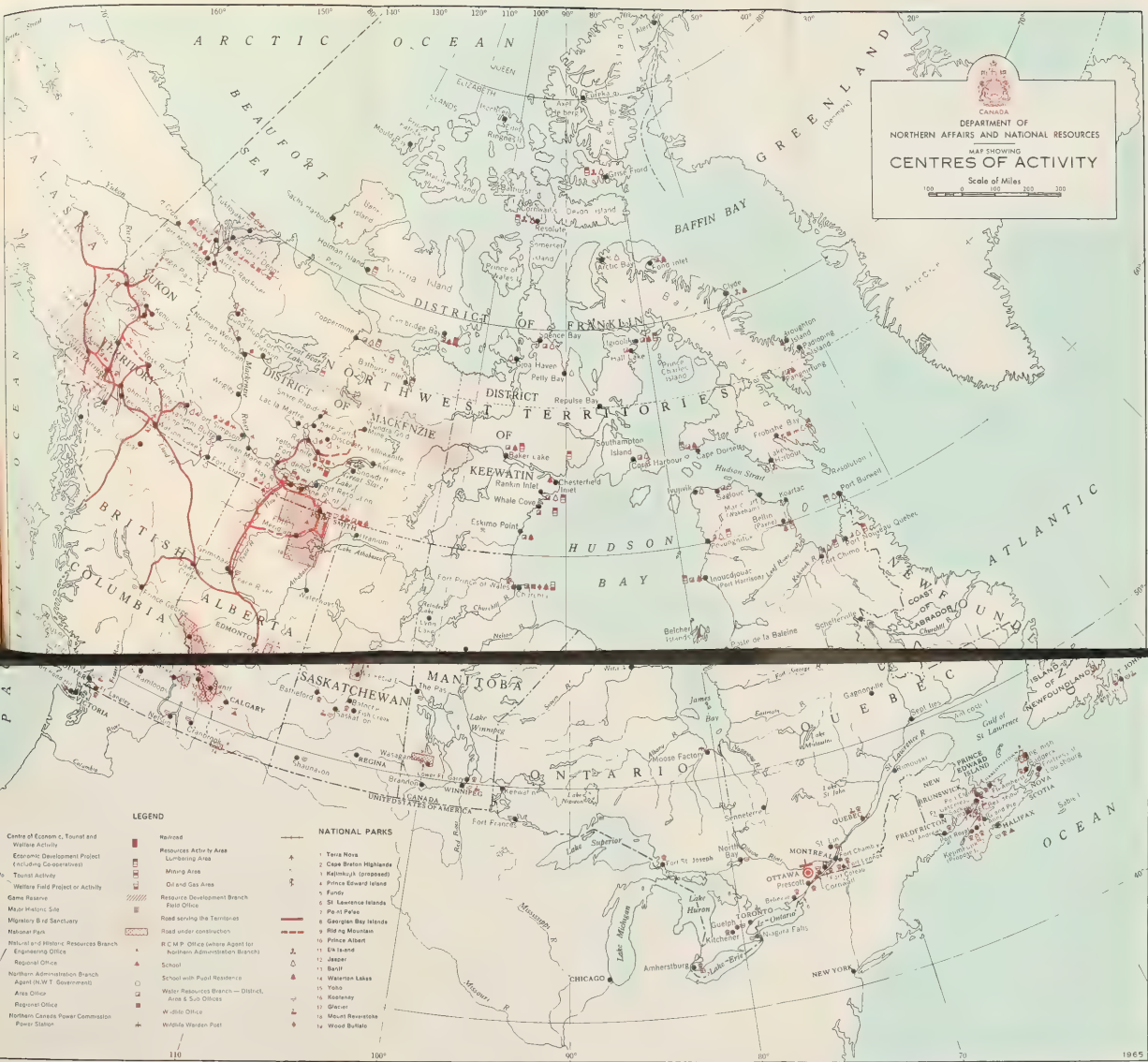
Summary of Revenues and Expenditures 1964-65

	Revenues	Expenditures
ADMINISTRATION SERVICES	\$ 12,459.11	\$ 1,328,987.29
Contributions to the Provinces for Campground and Picnic Area Developments		58,971.01
Roads to Resources		6,062,027.10
NORTHERN CO-ORDINATION AND RESEARCH CENTRE		315,318.98
NATURAL AND HISTORIC RESOURCES BRANCH		
Branch Administration		438,690.85
National Parks and Historic Sites	2,804,202.85	23,145,134.08
Grant to Jack Miner Migratory Bird Foundation		5,000.00
Grant in aid of the development of the International Peace Garden in Manitoba		15,000.00
National Battlefields Commission		315,300.00
Canadian Wildlife Service	6,512.69	1,212,218.71
	2,810,715.54	25,131,343.64
WATER RESOURCES BRANCH		
Administration and Construction	120,114.59	2,388,886.41
Studies and Surveys of the Columbia River Water- shed in Canada		32,473.68
Fraser River—federal expenditures in connection with investigations carried out by the Fraser River Board		7,741.13
Nelson River Study — Expenditure in connection with investigations to be carried out in accordance with an agreement entered into between Canada and Manitoba		781,504.56
Contributions to the Provinces towards the construc- tion of dams and other works to assist in the con- servation and control of water resources in accordance with agreements entered into between Canada and the Provinces		8,949,500.51
	120,114.59	12,160,106.29
NORTHERN ADMINISTRATION BRANCH		
Branch Administration	8,073.50	1,292,197.46
(Public Lands)	95,355.67	
Education	262,289.53	7,932,087.54
Welfare and Industrial	409,565.33	4,868,778.98
Yukon Territory	567,902.20	5,888,215.42
Northwest Territories	2,622,145.05	15,834,466.39
	3,965,331.28	35,815,745.79
OTHERS	16,968.83	22,214.74
TOTALS FOR DEPARTMENT	6,925,589.35	80,894,714.84

DIRECTORY TO ADDITIONAL INFORMATION

General Information.....	Information Services Division, Department of Northern Affairs and National Resources, 400 Laurier W., Ottawa
Monthly oil and gas report	Resource Management Division, Resource Development Branch, Department of Northern Affairs and National Resources, 400 Laurier W., Ottawa
*north (a bi-monthly magazine).....	The Editor, north, Northern Administration Branch, Department of Northern Affairs and National Resources, 400 Laurier W., Ottawa
National Parks.....	Natural and Historic Resources Branch Department of Northern Affairs and National Resources, 400 Laurier W., Ottawa
Canadian Wildlife.....	Canadian Wildlife Service, Department of Northern Affairs and National Resources, 400 Laurier W., Ottawa
Water Resources	Water Resources Branch, Department of Northern Affairs and National Resources, 400 Laurier W., Ottawa

*available from the Queen's Printer, Ottawa.



Government
Publications





Department of Northern Affairs and National Resources

Annual Report Fiscal Year 1965-1966

Issued under the authority of

HONOURABLE ARTHUR LAING, P.C., M.P., B.S.A.,

Minister of Northern Affairs and National Resources



1156262

ROGER DUHAMEL, F.R.S.C.
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OTTAWA, 1966

Cat. No. R1-1966

*The Honourable Arthur Laing, P.C., M.P., B.S.A.,
Minister of Northern Affairs and
National Resources.*

SIR:

I have the honour to submit the Thirteenth Annual Report of the Department of Northern Affairs and National Resources for the fiscal year ending March 31, 1966.

The information in the Report is prepared in such a way as to reflect the changes in your responsibilities which were made effective by Order-in-Council on January 1, 1966. There is, therefore, a report for the Indian Affairs Branch which was placed under your authority on that date, and no report for the Water Resources Branch, the responsibility for which was transferred to the Minister of Mines and Technical Surveys. The Water Resources Branch has made a significant contribution in the development of a national water policy and its staff has brought credit to the Department over the years.

There has been continued progress in the implementation of the management improvement and personnel programs in the Department. There have been and will continue to be adjustments made in both programs to take account of the important changes in the scope of the Department's interests and the consequent increase in its staff, particularly in the field.

The Department came together for the first time in the same building in July. This move has contributed very greatly to the efficiency of the Department as a whole and to the morale of the staff. I know that you can depend upon the continued efforts of the staff to serve the people of Canada in the areas of the Department's responsibilities.

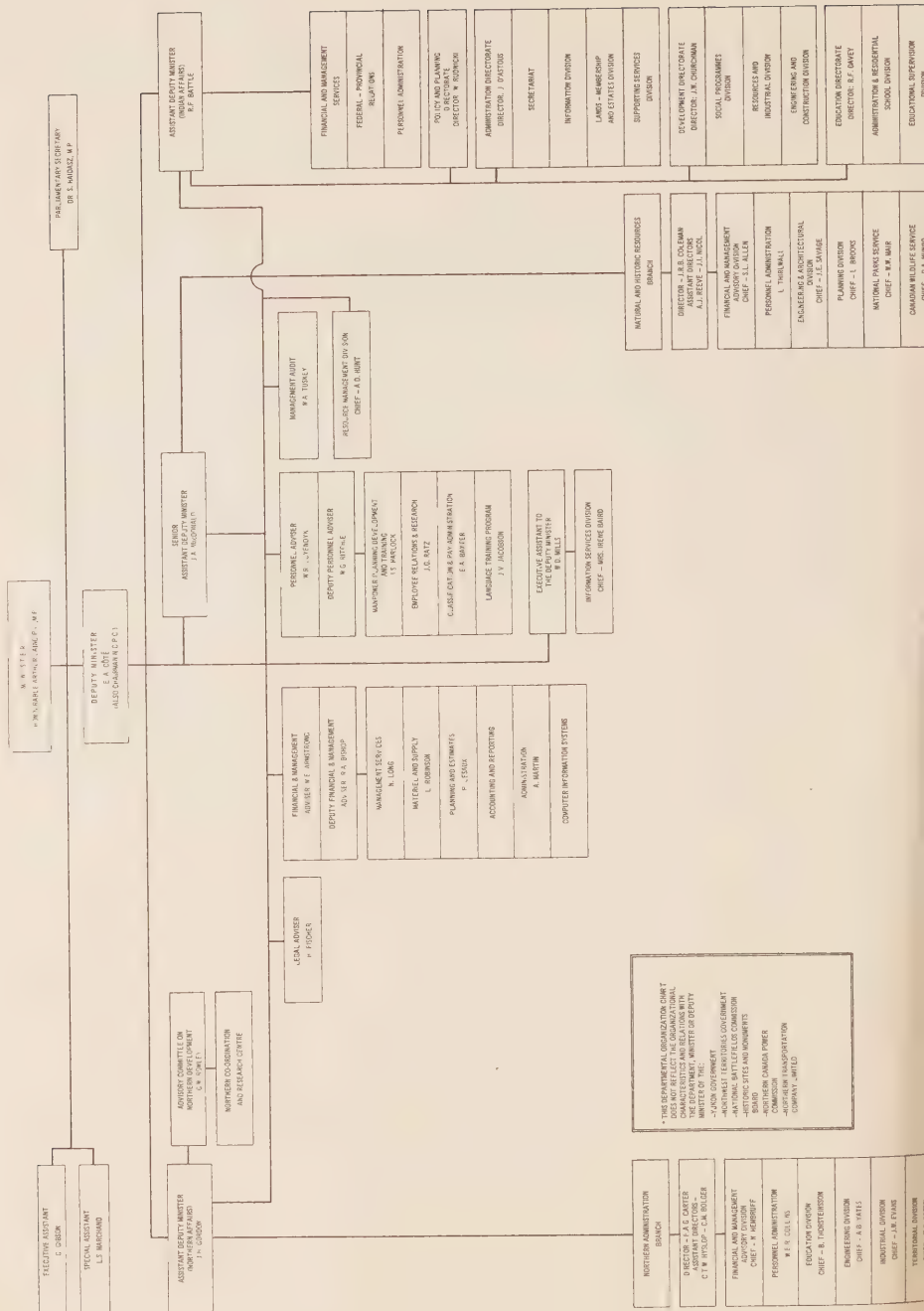
Respectfully submitted,

E. A. CÔTÉ,
Deputy Minister.

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ORGANIZATION CHART



The North

In the two territories north of the sixtieth parallel, the duties, powers and functions of the Minister of Northern Affairs extend to all matters not assigned to any other department, branch or agency. The Minister co-ordinates the activities of several departments, branches and agencies in both territories; recommends measures for their further economic and political development and fosters, through scientific investigation and technology, knowledge of the Canadian north and of the means of dealing with conditions related to its further development.

In practice some degree of government administration has been decentralized to the territories, in particular to the Yukon where the public service is responsible to the Commissioner.

In 1962, Parliament voted \$7 million for capital expenditures in the Yukon, over the five year period from April 1, 1962 to March 31, 1967. Advances from this fund were made to the Yukon during the year to cover the Territory's capital requirements for loans not exceeding \$1,882,450. In addition to this, the annual operating grant which for this year was \$2,631,000 was made to the Yukon for operation and maintenance in relation to such activities as the education, welfare, area development programs. Officers of the Department act in an advisory capacity in accordance with instructions that have been issued from time to time by the Minister.

With the exception of game, the Department is directly involved with the administration of natural resources in both the Yukon and the Northwest Territories. To carry out this function, federal mining engineers and inspectors, land agents, mining recorders, forestry officers and administrative officers are stationed throughout the territories.



The modern concentrator at Pine Point includes zinc-coated steel siding for protection against corrosion and severe winter weather.

(photo by Cominco)

Northern Resource Development

During the year, the former Resource Management Division combined with the Economic Adviser's Office to form the Resource and Economic Development Group. The Group has two Divisions: Economics and Resource Management.

In the Yukon Territory, the Ross River staking rush dominated the 1965 mining season. Anvil Mines Ltd. (Dynasty Explorations Limited) which acquired large groups of claims in the area adjoining the Vangorda lead-zinc deposits, was the most active company carrying out exploration work. Geophysical and geological surveys were conducted over a large area and numerous anomalies were found, some of which were drilled with encouraging results. The company indicated that the potential of its holdings amounts to 40 million tons of lead-zinc ore. This sparked a staking rush late in the season and by the end of the year, 5,500 claims were recorded. The rush is continuing and is expected to become more intense in 1966.

Kerr Addison Mines Limited, which owns the Vangorda property where approximately 9 million tons of high-grade lead-zinc ore have been blocked out, initiated a diamond drilling program on a second anomaly on its Swim Lake property. Good tonnage possibilities of lead-zinc are indicated in this area.

New Imperial Mines Limited continued diamond drilling and now has an estimated 6 million tons of copper ore outlined on its holdings in the Whitehorse Copperbelt. A feasibility study has been completed. The company has announced production plans for this property and an agreement has been completed with a Japanese firm.

The Cassiar Asbestos Corporation has announced production plans for its asbestos property on Clinton Creek in the Dawson area. The Federal Government is spending \$2,800,000 in connection with this project as part of its Northern Roads Program. This includes reconstruction of the Dawson-Sixty Mile Road, contribution to the costs of an access road to the property and a bridge over the Forty Mile River.

Mount Nansen Mines conducted underground lateral development as well as diamond drilling on its gold property in the Mount Nansen area west of Carmacks. Several thousand feet of drifting and cross-cutting were completed. Yukon Antimony Corporations' principal effort was concentrated on providing access to its Carbon Hill property by the construction of a bridge across the Wheaton River and work on an access road. Some diamond drilling was completed and good values in antimony were indicated.

Small underground exploration programs have been reported in the Carcross, Keno Hill and Mount Nansen areas; these are being done by Arctic Mining and Exploration, Silver Titan Mines and Mount Nansen Mines respectively. Nordex Exploration also is reported to be active at its Casino Creek silver-lead property.

Discovery Mines started production at its Laforma mine in the Mount Freegold area in June but has been forced to suspend operations owing to a combination of circumstances. The Yukon Coal Company maintained normal production throughout the year.

Forty-two prospectors operated in the field under the Prospectors' Assistance Program.

Although total output is expected to increase significantly in the years ahead, the value of mineral production for 1965 in the Yukon declined 13 per cent over the previous year (1964) for two reasons. The Yukon Consolidated Gold Corporation, which plans on phasing out its dredging operations in 1966, cut back to five dredges in operation and 200 men employed compared with six dredges and 280 men in 1964. Secondly, United Keno Hill Mines was compelled to reduce its production because of a manpower shortage. The mill's daily average declined from 500 to 400 tons and its labour force dropped from 650 men in 1964 to 545 men in 1965.

The following tabulation shows the preliminary production figures for 1965 and comparative figures for 1964:

Mineral	1964		1965*	
	Quantity	Value	Quantity	Value
Gold	57,844 oz.	\$2,183,611	46,878 oz.	\$1,768,707
Silver	5,638,712 oz.	7,894,196	4,495,121 oz.	6,288,674
Lead	20,418,415 lbs.	2,744,235	17,015,000 lbs.	2,637,325
Zinc	13,094,653 lbs.	1,855,512	14,000,000 lbs.	2,114,000
Cadmium	132,222 lbs.	428,399	152,000 lbs.	422,560
Coal	7,229 tons	98,150	9,000 tons	110,000
TOTAL		\$15,204,103		\$13,341,266

*Preliminary

In 1965 the total value of mineral production in the Northwest Territories quadrupled the 1964 figure (\$17,611,789 to \$72,371,468) primarily as the result of production from Pine Point. In 1966, total mineral production may amount to \$90,000,000.

Highlight of the year was the staking rush (largest in the history of northern Canada) initiated by reports of discoveries of high grade lead-zinc ore on property adjoining the claims of Pine Point Mines Limited. More than 23,000 claims were recorded in the Pine Point vicinity; the total area staked was about 80 miles in length and 25 to 30 miles in width. Some 80 companies acquired claims and started, or planned to start, geophysical and geochemical surveys and diamond drilling of anomalies. A sub-office was established by the Department of Northern Affairs and National Resources at Hay River which relieved some of the pressure on the Yellowknife Mining Recorder's office.

In spite of the extremely cold weather, staking activity continued during the winter months and indications are that it will continue for some time and extend northeasterly through the Thubun Lake area.

Activity in other areas of the Northwest Territories, while not on a scale comparable to Pine Point, was nevertheless pronounced.

Baffinland Iron Mines explored its high grade iron showing (originally discovered in 1962) in northern Baffin Island. A tote road 65 miles in length was completed connecting the base camp at Mary River with the harbour site at Milne Inlet. The Federal Government contributed \$15,000 to the construction of the tote road and \$40,000 toward the construction of an airstrip at each site. Detailed surveys were made for a proposed railway to Milne Inlet as well as the proposed townsite and harbour area. Closely spaced diamond drilling was done on the No. 1 zone and bulk samples were shipped out for test purposes.

Texas Gulf Sulphur carried out additional development work on its Strathcona Sound lead-zinc property on the south shore of Admiralty Inlet. The Selco people were active on holdings in the southern Keewatin District; Kennco carried out development work on property in the Rankin Inlet area. On Little Cornwallis Island the Consolidated Mining and Smelting Company entered into an agreement with Bankeno to develop its lead-zinc showing.

Anglo United Development conducted a diamond drill program on its Snare River gold showing, and Gunnex examined and drilled a gold discovery made in 1964 at Clan Lake north of Yellowknife.

A geophysical survey was made by Fort Reliance Minerals on copper showings on the east arm of Great Slave Lake. The James River Syndicate and McIntyre Mines worked on gold showings in close proximity to Coronation Gulf on the Arctic coast. On a favourable showing at Sulphur Bay on the west shore of Great Slave Lake, Rayrock Mines performed a diamond drill program to probe the possibility of lead-zinc minerals. The Roberts Mining Company employed prospecting parties in several areas of the Northwest Territories.

Thirty-four prospectors participated under the Prospectors' Assistance Program sponsored by the Federal Government. During the 1965 calendar year, 15,492 mineral claims were recorded as compared with 4,377 the previous year.

The concentrator at Pine Point was completed and began operating in November 1965. The first shipment of concentrates left the property on November 29.

Giant Yellowknife Mines, Con-Rycon-Vol, Discovery and Tundra (the four northern gold mines) maintained normal rates of production. Due to the higher grade ore milled, however, the value of gold production surpassed the 1964 figure by 10 per cent in spite of difficulty in securing adequate manpower. Silver production increased about 100 per cent due to the production from Echo Bay Mines on Great Bear Lake where operations were conducted for a full year. Echo Bay Mines accounted for all copper production in the Northwest Territories for the 1965 season.

Canada Tungsten continued mining and milling on its tungsten property in the Flat River area.

The following tabulation shows the preliminary production figures for 1965 and comparative figures for 1964.

Mineral	1964		1965*	
	Quantity	Value	Quantity	Value
Gold	412,879 oz.	\$15,586,182	452,000 oz.	\$17,053,960
Silver	65,223 oz.	91,312	1,274,200 oz.	1,782,606
Copper	—	—	850,000 lbs.	319,600
Lead	6,125,588 lbs.	823,279	156,724,000 lbs.	24,292,230
Zinc	7,840,620 lbs.	1,111,016	187,125,000 lbs.	28,255,875
Cadmium	—	—	240,000 lbs.	667,200
Tungsten	1,623,980 lbs.	1,081,927	3,749,267 lbs.	3,112,933
TOTAL		\$18,693,716		\$75,484,404

*Preliminary

Oil and gas exploration expenditures in the Yukon and Northwest Territories reached \$23,000,000 in 1965. Offshore explorations amounted to \$8,000,000.

Continued interest is being shown in the Peel Plateau area. In three work bonus sales, an additional one million dollars was committed for exploration. This should result in the drilling of an additional two or three wildcat wells during the next two or three years. A total of 20 wells may be drilled in the Liard Plateau and Great Slave Lake area in 1966.

Plans for 1966 include a seismic program to be carried out over Prince Patrick, Mackenzie-King and Melville Islands by an airborne geophysical party. This is the first time such a survey has been planned in the Arctic Islands.

A gas discovery was made in 1965 in the Liard area of the Northwest Territories and one gas and one oil well were discovered in the Eagle Plains of the Yukon.

In 1965, surface geological surveys by the oil industry decreased from 1964. Geological parties continued extensive investigations of the stratigraphy and structure in the sedimentary ranges of the Mackenzie and Richardson Mountains in the Northwest Territories, on the Eagle Plains in the Yukon and in the Hudson Bay Lowlands.

Aircraft are becoming increasingly important. Today most supplies and personnel are transported to and from the field by plane, and surface investigations are carried out by helicopter-supported parties.

In the Hudson Bay area, a geological party investigated outcrops along the coast and in river valleys. Another party specialized in underwater surveys and collected samples along the sea-bottom. A conventional seismic survey and gas exploder survey was run to assist in the interpretation of structures and to determine the thickness of sediments.

During the year under review, an aeromagnetometer survey was conducted covering approximately the west half of Hudson Bay. Light mobile seismic equipment adapted for transport by helicopter was used in muskeg and highly dissected terrain during the summer months. In 1965, three companies used this equipment in the Northwest Territories and Yukon. Operational costs are comparable to conventional seismic methods and operations can be carried out during the whole year. In previous years, geophysical operations were restricted to winter months.

Three geological parties conducted surface investigations throughout the Arctic Archipelago. An aeromagnetometer survey by Hunting Survey

Corporation covering most of the central and western Arctic Islands was completed during the year.

Federal participation in, and encouragement of resource development is accomplished through incentive programs such as road programs and resource airstrip assistance. Roads to Resources is a national program designed to provide access to areas potentially rich in natural resources.

The northern roads program is a ten-year, \$100 million program for the construction of roads in the Yukon and the Mackenzie District of the Northwest Territories. It plans a broad pattern of trunk roads to open up the country with areas of resource potential not more than 200 miles distant from a network road. The program provides for construction of resource development roads and area development roads, as well as tote trails, initial access roads and permanent access roads, the last three on a cost-sharing basis with private developers. As part of this program, tote road assistance for each territory was increased from \$50,000 to \$100,000.

The Federal Government now provides loans to Canadian individuals and to corporations which are not eligible for the mineral exploration incentive under the Income Tax Act whereby exploration expenditures can be charged off general income regardless of source. This Mineral Development Loan Fund is designed to make funds available for exploration in an amount not exceeding 40 per cent of the cost of approved exploration programs.

The Northern Resource Airport Policy provides further assistance for airport construction to aid resource development on a cost-sharing basis. On early *exploration* aerodromes, federal assistance is \$20,000 or 50 per cent of the actual cost, whichever amount is less; on early *production* phase airports, federal assistance is a maximum of \$100,000 or 50 per cent of the actual cost, whichever amount is less.

Lands

In the Yukon, to prevent uncontrolled and haphazard development around larger townsites, vacant Crown land adjoining the townsites is reserved in the name of the territorial government.

At Clinton Creek where the Department is spending \$2,800,000 as part of the northern road program, the area has been protected from nuisance staking by withdrawing the surface of the lands concerned from disposal by Order in Council under the Territorial Lands Act. The Cassiar Asbestos Corporation has constructed an airstrip and proposes to develop the townsite.

During the year, almost all items listed for survey in 1965 were completed. Among surveys undertaken were the subdivisions at Watson Lake and Ross River and additions to the public campgrounds at Watson Lake, Tagish and Pine Lake.

The survey program for 1966 is more extensive; surveys will be made at Teslin, Destruction Bay and Whitehorse. Twelve public campgrounds will also be surveyed.

At the end of the fiscal year there were slightly more leases and agreements in force than last year. This is consistent with the small but steady increase that has been apparent in previous years.

Present status

Leases in force	490
Agreements of sale in force	201
Land sales completed	63
	<hr/>
TOTAL	754

28 assignments were registered during the year, and 16 parcels of land were acquired by purchase or other means.

A break-down of the 490 leases in force indicated the following land uses:

Agricultural.....	9
Commercial.....	133
Gardening.....	7
Grazing.....	56
Quarrying.....	5
Recreational.....	6
Religious and Educational.....	17
Residential.....	257
TOTAL.....	490

Revenue from the administration of Crown lands in the Yukon Territory amounted to \$52,765. Of this \$27,289 was derived from the sale of lands under the control of the Commissioner of the Yukon Territory; proceeds were credited directly to the Territorial Revenue Account.

In the Northwest Territories one of the main activities in lands was centered in the townsite of Inuvik where three new residential blocks were surveyed. At Hay River surveys of the commercial and town centre area, and the residential area were completed.

At Pine Point a readjustment in the commercial area has been made. A sale of lots by public tender was held and sites for a hotel and department store complex and two blocks of shopping modules were sold. Pine Point Mines Limited bought—as a unit—and will operate the trailer park of 28 lots.

During the construction of the Great Slave Lake Railway, a strip of land two miles wide bordering the track was withdrawn from disposal. When the railway was completed and the land released to disposal, mining and petroleum and gas interests quickly blanketed the area with mineral stakings and oil and gas permit applications.

About 5,454,000 cubic yards of sand, gravel and ballast were used in construction of the portion of the Great Slave Lake Railway lying in the Northwest Territories.

Although the field work has been completed, the report of a study of potential grazing and farming areas in the basin of the Slave River by the Department of Agriculture is not yet ready.

Across the Northwest Territories townsite subdivisions were surveyed at Holman, Whale Cove, Eskimo Point, Coral Harbour, Pond Inlet and

Pangnirtung. The disposal of lots will go ahead as soon as survey plans have been registered. Depending on the amount of planning that can be done, it is hoped that at least six additional Arctic settlements will be surveyed during the summer of 1966.

Other items on the survey program for next year are a new townsite at Wrigley and another addition to the town of Inuvik.

The number of leases, agreements and other land privileges in force is comparable with the figures for last year.

Present status

Leases in force	421
Agreements of sale in force	217
Land sales completed	74
TOTAL	712

The following break-down of the total number of leases in force indicates land uses:

Agricultural	12
Commercial	212
Gardening	13
Grazing	—
Quarrying	7
Recreational	5
Religious and Educational	32
Residential	140
TOTAL	421

13 assignments were registered during the year, and 14 properties were purchased or otherwise acquired.

Revenue from the administration of Crown lands in the Northwest Territories amounted to \$168,708.

Forests

The role of the Yukon and Mackenzie Forest Services has shifted in emphasis from forest protection to forest management. Fire control forms the basis of the strengthened management program, but is no longer the only responsibility of the Forest Services.

Northern forests are being used to an increasing extent for recreational and industrial purposes. Their value as a wildlife habitat and for watershed control has added to the urgency for a fuller management program.

For the growing number of tourists who visit the north each year, 52 campgrounds have been developed and are maintained by the Yukon and Mackenzie Forest Services. These are located at strategic spots throughout the territories and provide cooking and overnight camping facilities.

Timber production figures for the Yukon are:

Lumber	6,358,457 f.b.m.
Fuel wood	7,578 cords
Round timber.....	1,608,346 linear feet

The 1965 fire season in the Yukon was the heaviest since 1958. A total of 75 fires burned an area of 18,674 acres. This loss is considerably lower than average for the number of fires and can be attributed to improved fire fighting equipment and greater use of aircraft.

Timber production figures for the Mackenzie District are:

Lumber	472,862 f.b.m.
Fuel wood	2,404 cords
Round timber	1,269,741 linear feet

In the Northwest Territories the 1965 fire losses were the lightest in many years. The summer was comparatively wet and fire fighting methods were more effective than in the past. The Mackenzie Forest Service, in charge of fire control in the Northwest Territories and Wood Buffalo National Park, reported that 109 fires had burned 9,203 acres of Crown forests.

Education

In the Yukon, capital loan grants, amounting to \$572,685 were made toward the school construction during the year; an estimated \$443,445 in school fees (from Indian Affairs Branch for Indian students and federal departments for the children of federal employees), was applied to school operating costs. Schools in the Yukon are operated by the territorial government.

In the Northwest Territories, schools are operated by the Department with the exception of Public and Separate schools at Yellowknife and the separate school in Hay River.

During the year under review, school enrolment in the Northwest Territories and Arctic Quebec increased by 573 pupils to a total of 7,280. Of these, 3,036 were Eskimos; 1,318 Indians and 2,926 others. Twenty-two additional classrooms were opened during the school year.

In the small sealing community of Holman (population 175) on Victoria Island, a new two-room school was built, and Eskimo children attended classes in their home settlement for the first time. A four-room school was completed to accommodate youngsters at the booming mining centre of Pine Point.

Renovations to the vacated military complex at Fort Churchill, Manitoba provided classroom, shop and pupil residence facilities for another 100 children from the Eastern Arctic, increasing its capacity to 250. The classrooms are equipped to teach commercial courses, home economics and child care as well as academic subjects to support the pre-vocational training program. In a spacious hangar vacated by National Defence, courses in carpentry, metal work and the maintenance and repair of motors are attended by Eskimo youths. During the school year, 228 youngsters lived in residence in the Fort Churchill complex. Of these, 59 took straight academic courses at the Duke of Edinburgh School, the remainder were in pre-vocational training.

A long-range program to provide a complete school system throughout the north by 1971 (including matriculation, diploma, vocational high

school and occupational courses) was approved. Classrooms are most needed for children who will reach school age in the next six years, and for older students (in the 16 to 21 age group) who would remain in school if appropriate facilities were available. The objective of the program is to provide classroom accommodation and special facilities for approximately 11,500 pupils within the next few years. Facilities to house about 1,550 resident students and 200 members of the teaching staff will be completed as well. The present capacity of northern schools will be expanded by approximately 58 per cent under the new program.

Basic plans and building schedules were prepared for the ensuing major construction projects and work will go ahead on these during 1966-67. A 16-room secondary school will be started at Inuvik, a 14-room school and 200-bed pupil residence at Cambridge Bay and a 12-room elementary school at Hay River. When these buildings are finished, the crowded conditions in many of the northern schools will be greatly relieved.

The principal responsibility of the Curriculum Section is to develop integrated sets of school programs and teaching resources. The Section also carries out those related services including Testing and Evaluation, Special Education, Audio-Visual Materials, School Library, Teacher Education and Research.

In Audio-Visual Services, new committees were appointed (with representatives from Adult Education and the Industrial Division) to develop a new series of filmstrips on northern co-operatives. In School Library Services, a supplement to the Northern School Library list was prepared. In Testing and Evaluation Services, a system-wide testing program was conducted and norms were published for a number of selected standardized tests. In Language Arts, a summer school for northern teachers who teach English to speakers of northern languages was conducted and a manual for teachers produced. In Mathematics, a new workbook incorporating modern approaches to the teaching of Mathematics was especially prepared for northern schools.

Committees of teachers in the northern settlements continued to work on the development, evaluation and revision of new school programs and instructional materials, and several helpful publications were produced. Noteworthy in this respect are the publications "Eskimo Games" and "Physical Education Illustrated" prepared as supplements to the new "Arctic Physical Education Program".

For young adults who missed early academic training, continued emphasis is being placed on developing programs in pre-vocational areas. At the Sir John Franklin School in the Mackenzie, 151 students were given pre-vocational courses; 164 from the Eastern Arctic attended courses at Churchill. The students spend half of their school day in shops, commercial, or home economic rooms and the remainder of the day in special academic upgrading programs.

Youngsters who have successfully completed the pre-vocational programs, may go on with academic courses, take further vocational courses in the north or in southern Canada, enter the apprentice training program or go direct into employment or on-the-job training.

During the year under review, the Department established 41 positions for trade apprentices. In some cases Eskimos had been working in trades for several years; their knowledge of the trade was tested, through interpreters if required, to determine their level in the program. On-the-job training was combined with part-time classes in Mathematics, English and Science to assist in upgrading northern residents to a required level.

A total of 18 certificates of trade proficiency were issued during the year on the basis of provincial or other trade certifications; 81 certificates were issued as the result of written examinations, and 47 apprentices were registered. Twenty occupations are now represented in the apprentice training program and another five are being developed.

Positions for apprentice clerks were also created in administrative offices in northern settlements. These apprentices are required to have a minimum of Grade IX. For three years they will combine on-the-job training and correspondence courses in Elementary Mathematics, Book-keeping, Typing, Commercial Law and Business Arithmetic. At the end of the course, apprentice clerks are expected to qualify for clerical positions in open competitions across Canada.

Fur-grading courses at Yellowknife in August 1965 for twelve members of co-operatives and at Churchill in February 1966 for ten members of Eskimo co-operatives are examples of training in basic skills necessary for their work in the north. Other courses included tourist guiding, the building of boats and log houses and the manufacture of fur garments.

Increasing emphasis is placed on longer courses related to specific employment that may include multi-year courses at southern institutes of technology. In co-operation with the Department of National Defence, courses were arranged at various service schools. Northern residents are

also being trained, through arrangements with the Department of Transport and the Department of National Health and Welfare, for service with these Departments in the north. During the year under review, a total of 366 Eskimos, 141 Indians and 252 others received vocational training in 108 different occupations.

Preparatory plans for extending adult education services were made during 1965-66. The staff will be increased from two to fifteen in the coming fiscal year. In addition, adult educators will be hired on contract to conduct the adult education component of the new Rental Housing Program for Eskimos, which will commence in the Frobisher Region in 1966.

During the year further work was done on the preparation of adult education materials for the functional literacy program. These were related to helping parents understand the importance of sending a child to school at the age of six years. A course called "The Child at Home and at School" shows the influence of the home, community, church and the school on the life of the child. A supplementary course presents to the parents whose child must go away to school, a picture of the foster settlement. Fort Simpson was chosen for the initial illustrated workbook. Kits of instructional materials, including colored slides and pictures for use in both courses, were assembled. Two workbooks "Learning to Write" and "Learning to Print" were prepared for use with all adult education courses.

The increase in the Adult Education Section staff at Branch Headquarters in Ottawa (from one to five) will permit conducting experimental projects, providing consultant services, preparing suitable materials for adults (especially the Indian, Eskimo and Metis who have had little or no schooling) and providing support adult education services for programs of other divisions or departments working in the north.

The past year, 41 applications for financial assistance were approved under the Northwest Territories Financial Assistance for Higher Education Program. Fifteen of the 41 successful applicants received both grants and loans. The total financial commitment for the year was \$33,296 which is an increase of \$11,365 over the previous year. Under the Canada Students Loans Act passed in July 1964, loan applications for eight students (totalling \$7,115) were approved.

The \$800 Northwest Territories scholarship was awarded to Miss Gail Patricia Robinson of Yellowknife who attended the University of

Alberta in the Faculty of Science (Nursing) during 1965-66. The national chapter of the Imperial Order Daughters of the Empire offered 20 achievement awards, valued at \$25 each to students in secondary school grades. The awards which were given for the first time in the 1964-65 school term are made on the basis of achievement during the school year.



Soapstone carvings by Tiktak of Rankin Inlet are highly prized by collectors of Eskimo art.
(Photo by H. Burgess)

Tourism, Arts and Crafts, Co-operative Development

The volume of tourist traffic to the Yukon and Northwest Territories showed a healthy increase during the year. In the Yukon, tourism is encouraged by territorial Department of Travel and Publicity, in Whitehorse; in the Northwest Territories, promotion for the tourist industry is done by the Northwest Territories Tourist Office of the Industrial Division.

An estimated 6,000 tourists spent approximately \$1,500,000 in the Northwest Territories in the 1965-66 season. Two new sports fishing lodges opened, bringing the total to 16 lodges now in operation. Several applications were made to lease land for the development of additional tourist facilities. Seven hotels and four motels offer accommodation throughout the territories. Sports hunting in the Mackenzie mountains opened during the year. Six outfitters were licensed; at the end of the season one outfitter reported that his parties had taken 11 grizzly bears, numerous Dall sheep, caribou, moose and a few wolves.

An over-all survey of the tourist potential of the territories is planned. The first travel development survey was made during the summer, 1965 along the Mackenzie Highway; a detailed travel development survey is also planned for the region around Great Slave Lake.

Publicity and promotional tours were sponsored for groups of writers, resulting in excellent publicity. Display cases featuring the lure of northern sports fishing were placed in Toronto and Ottawa air terminal buildings. Manned exhibits in two sport and travel shows in the mid-western United States were maintained for the first time.

A major source of revenue for the Eskimo residents of Northwest Territories is the world-famous arts and crafts program.

During the year under review, a fresh source of artistic talent was revealed in the work of five Eskimo artists from Holman on Victoria Island. Four of the group—the hunters and trappers—drew scenes of primitive Eskimo life and the hunt. The work of the fifth artist—a 70-year old woman—reflected her knowledge of the age-old culture and legends of her people, the Copper Eskimos.

The Holman artists, organized in the Holman Eskimo Co-operative, had been experimenting with print-making since 1962; in 1963, an artistic adviser was appointed by the Department to work at Holman and assist with the technical aspect of print-making. After months of work, a collection of prints was approved by the Eskimo Art Committee and shown for the first time at the New Brunswick Museum in Saint John in November 1965. During the year the people at Holman extended their program to include printing of designs on linen fabric.

In the former mine building at Rankin Inlet an extensive arts and crafts program is producing fur-trimmed and duffle clothing, experimental work in ceramics and carvings in walrus ivory and soapstone. Several of the Arctic's most talented carvers live in Rankin; the monthly budget, paid to the Rankin carvers and handicraft workers is \$9,000. A permanent craft centre will be built at Rankin in 1966. At Baker Lake in the Central Keewatin, the arts and crafts program brings \$7,000 a month into the community.

Arctic co-operatives play an integral part in helping the people to benefit from their artistic talent and the development of resource harvesting programs.

At Fort Chimo in Arctic Québec, the Fort Chimo Co-operative Association was incorporated in 1961; a loan of \$15,000 was granted to develop a fishing program. Later a \$10,000 loan was made to develop the handicrafts program. Today the Fort Chimo Co-operative Association is one of the largest in the Arctic. Both loans have been repaid and sales of handicrafts, Arctic char and lumber passed the \$100,000 mark in 1964. "Ookpik" was designed by Mrs. Jeannie Snowball, a member of the Fort Chimo Co-operative Association. For the centennial year, 25,000 sealskin Ookpiks have been ordered from the co-operative; these are being sewn by hand at the rate of 1,000 a month.

Arctic producer co-operatives offer the greatest possible participation by the people themselves. Through membership, the northern people have an opportunity to learn some of the economic facts of life and to get some control of their economy into their own hands.

At the end of this fiscal year, there were 22 co-operatives and two credit unions in the north. Twenty co-operatives and one union are given technical assistance by this Department; two co-operatives and one credit union are assisted by the Province of Québec. In several other settlements in the Northwest Territories and Arctic Québec, local groups are working

toward the establishment of a co-operative. Near the end of the year a new co-operative—Etsaredi Co-operative Association—was formed at Rae, N.W.T. Their main starting activity was the production of Indian handicrafts.

In 1963 delegates at the first conference of Arctic co-operatives held in Frobisher Bay asked the Department for assistance in establishing a strong central co-operative marketing agency to handle the increasing volume of arts and crafts. As an interim measure, a limited company—Canadian Arctic Producers—was established in October 1965, as a subsidiary of the Co-operative Union of Canada. Canadian Arctic Producers Ltd. will carry on marketing (previously done by this Department) until the central co-operative marketing agency is established by Arctic co-operatives. The establishment of such an agency was to be discussed at the second conference of Arctic co-operatives at Povungnituk at the end of April 1966.

During the year the first courses in co-operative information and fur-grading were held in Yellowknife, N.W.T., and Churchill, Manitoba. Participants were chosen to attend the course by their local co-operatives, and in most cases they were the men responsible for buying furs from the local trappers. A basic understanding of fur grades by buyers will guarantee fairer prices to the trappers from the co-operatives and better returns to the co-operatives after pelts had been sold at fur auctions in the south.

A total of 26 men from different settlements attended the courses. The talks on co-operatives and a guide book on fur grading were translated into Eskimo syllabics.

During the 1965 season, a new char fishery was in operation at Daly Bay and total production was 13,000 8-ounce cans of Arctic char; 11,000 cans were sold on southern markets. The fish resources of the Daly Bay area were not as plentiful as had been anticipated and during the winter months, the cannery was dismantled and moved to Rankin Inlet, an area more central to the resources of the region. Many of the Eskimo people trained at Daly Bay will continue to work at the re-located fishery: the quota for the 1966 canning season is 80,000 8-ounce cans of Arctic char and 90,000 8-ounce and 4-ounce cans of trout. About 80 per cent of the canned fish will be sold in southern Canada.

At Whale Cove on the west coast of Hudson Bay, more than 78,000 pounds of whale and seal meat were brought in by Eskimo hunters. Choice sections of the meat were fast frozen and canned in the south as

specialty foods with added seasoning (pickled muktuk, muktuk sausage and seal meatballs). The balance of the meat (about 52,000 pounds) was used locally. The quota for the Whale Cove operation in 1966 is 150 white whale and 30,000 pounds of seal meat. Construction will begin on a permanent cannery at Whale Cove in 1967.

At Port Burwell, storms and ice conditions cut back the catch of harp seals to 712, as compared to 1,928 the year before. The price of sealskins has dropped but demand for them remains strong. Most of the Port Burwell sealskins were sold directly to buyers; others were used by the handicraft industry to make stuffed sealskin animals, slippers and mukluks.

Engineering

Housing

Late in 1965, the Government approved a five-year rental housing program, designed to provide suitable living accommodation to all Eskimos in the Northwest Territories. The program is the result of study and research by various disciplines—Administration, Welfare, Industrial, Education, Public Health and Engineering—to meet the urgent need to provide better living accommodation for Eskimos.

The housing program will represent a large item in the budget of the Northern Administration Branch for several years to come. The objective is to provide houses relating to family size at a rental rate predicated on the family income and resources. Its success will demand careful administration.

The new low cost housing reflects the design and improved building methods suggested by the experimental Angirraq model built in 1964. Simplified joints, panel construction and new building materials have been combined to produce larger, more attractive houses that cost no more to build and maintain. The Engineering Division worked with other government agencies, manufacturers and private building groups and companies to develop improved building methods and design.

A progressive design in northern housing is the recently-developed three-bedroom staff house with suspended basement. Expanding on the "crawl-space" theory for warm living area floors, as well as service space for plumbing and heating, the suspended basement house was developed for permafrost areas. The basement level is the first or utility floor and the living area is the second floor. Prefabrication and standard construction are incorporated in the one unit to increase strength, stability and the area of the house, while maintaining capital costs. The increased ratio of "on-site" labour to southern manufacturing labour will assist the local economy.

In 1965 the following prefabricated buildings were purchased: three-bedroom houses (22); portable classrooms (8); powerhouses and extensions

(6); technical workshop (1); three-bay garage (1); warehouse garage (1); one-bedroom low-cost houses (30); three-bedroom low-cost houses (30); and one-room low-cost houses (170). The majority of the buildings have been delivered to the sites. Construction is planned in 1966.

With the expanding building program for housing and school facilities, electrical services are being standardized throughout the territories; this will facilitate the maintenance, expansion and replacement of installations. Diesel generators of larger capacities (75KW, 100KW and 125KW) have been installed in a number of settlements to provide for increased consumption. Seven additional plug-unit freezers are being produced and will be used to bring certain freezers in the Eastern Arctic up to a more efficient standard. Specifications for a standard freezer were reviewed and production of three freezers is underway.

In many remote settlements water is difficult and expensive to obtain; it must be hauled by truck or sled from the source to various buildings. In winter ice has to be cut. These factors rule out the provision of normal plumbing facilities due to the high consumption of fresh water.

In an effort to reduce the amount of water required an experimental recirculating sewer system was installed in the Cape Dorset school last year. Mechanical adjustments have been completed and the system is reported to be functioning satisfactorily. A smaller, house-sized recirculating sewage system, based upon the same principles as the larger unit at Cape Dorset, has been developed by a commercial manufacturer. This system is still experimental and a number of units are to be installed in Arctic houses for observation.

In Frobisher Bay an experimental water and sewer circulating system using an insulated plastic pipe casing will be put into operation. In cooperation with the National Research Council the system will be metered and instrumented to show the effects of flows under varying conditions. The results will provide valuable information for the design of piped water and sewer systems in northern communities, both large and small.

Community Planning

The preparation of basic information for settlement planning is continuing; this includes topographical plans on a scale of 1" = 100 with 5' contours showing all physical and cultural features. Ninety sites are under survey. One hundred and forty-four standard plans, thirteen advance plans and seventeen preliminary have been completed to date. During

1965, thirty-three sites were photographed vertically and precise ground control was established at four locations.

Settlement plans (land division, layout and zoning) and legal land surveys were completed for five sites—Whale Cove, Eskimo Point, Coral Harbour, Pangnirtung and Pond Inlet.

During the year consulting engineering firms were employed to carry out onsite engineering planning studies for eight sites and the Chief Architect of the Department of Public Works will carry out the required studies on four additional sites. Reports have been received for six sites—Broughton Island, Rae, Enterprise, Hay River, Igloolik and Cambridge Bay. Reports on Clyde and Inuvik were expected by May 15th, 1966, and the balance by the spring, 1967.

Services

Fuel oil was distributed to private consumers through the Hudson's Bay Company on a regional price basis. In one region the price was reduced by 11 cents per gallon; it remained approximately the same in others. Shell Canada Limited contracted to supply bulk fuel oil to Povungnituk and Inoucdjouac.

Non-directional radio beacons were installed by the Department of Transport at Bellin, Pangnirtung, Pond Inlet, Arctic Bay and Grise Fiord.

Specifications were drawn up for twenty boats of six sizes, purchased by the Department for its own use, and for sale under the Eskimo Small Boats Assistance Plan. Specifications were also prepared for about 90 pieces of construction and mechanical equipment and vehicles.

Maintenance

In accordance with the recommendations of the recent Glassco Commission Report concerning "make or buy", maintenance operations were reviewed to determine the day labour projects that could be adapted to contract work.

At Frobisher Bay, contracts were negotiated for the delivery of water and the collection of garbage and sewage at an estimated annual cost of \$480,000 over a three-year period. Janitorial services will be provided for federal buildings, schools and the Frobisher Hospital for three years at an estimated annual cost of \$171,200.

Contracts were also signed to provide petroleum oil, water and garbage and sewage services at Cambridge Bay for a period of five years

at an estimated cost of \$275,000. These contracts will be carefully controlled and the results will be appraised against the cost involved in the former day labour operations.

Territorial Operations

The design for a trucked water and sewage system for Fort Norman and a preliminary investigation for a water system at Arctic Red River were undertaken. The construction of a water and sewer system was started in Aklavik. In 1967 a new water and sewer policy will come into effect which calls for the extension or provision of services to all residences in any community now serviced by limited systems. During the five year period 1967-1972 an additional 14 communities will have both services provided.

Additional fire fighting facilities (both equipment and buildings) were purchased during the year; the design of a fire hall for Fort McPherson and Pine Point was completed. An extension to the emergency landing strip was started at Fort Simpson.

In the Yukon, a contract was awarded for a territorial jail at Whitehorse.

Roads

In the Yukon, the McCabe and Minto Bridges were replaced on the Whitehorse-Keno Road and guide rails were installed between Mile 35.5 and Mile 34 and on the south side of Two-Mile Hill. Pre-engineering studies were carried out to bring the remaining sections of the road up to trunk highway standards.

On the Watson Lake-Ross River Road construction was completed between Mile 144 and Mile 172. The equivalent of 9½ miles remains to be completed on the section between Mile 69.2 and Mile 144.

Six bridges were replaced along the Stewart Crossing-Dawson Road. Approximately ten miles of road were completed on the Ross River-Carmacks Road; an access road to the Ross River settlement was built. A survey was carried out on the first 37 miles of the Boundary Road.

In the Northwest Territories, the Hay River and the Buffalo River bridges were completed on the Fort Smith Highway. The section of the highway from Mile 97.5 to Mile 158 was 65% completed under contract; the work is expected to be finished during 1966. Approximately thirty miles of gravelling and stockpiling has been done on the Fort Smith Highway;

on the Pine Point Highway gravelling and stockpiling has been completed.

A survey was carried out on the Hay River Highway within the Municipal District of Hay River; this section of road will be reconstructed for flexible surfacing in 1966.

The M.V. "Johnny Berens" ferry across the Mackenzie River near Fort Providence made 8,018 trips between May 20 and November 7, 1965 and carried 8,530 vehicles.

The progress and testing of the Hovercraft have been followed, with the hope that it will be developed to a stage where it can be used economically in the north.

Welfare Services

The Northern Welfare Service of the Department is responsible for planning and providing social welfare measures for Eskimos in Canada. It carries out a similar responsibility for the benefit of those persons in the Northwest Territories who come under the jurisdiction of the Government of the Northwest Territories.

In general terms, the Northern Welfare Service provides assistance to individuals and families who find themselves in serious financial and social difficulties. The service also provides special measures to advance the social and cultural development of northern groups and communities. In the Yukon, welfare programs are operated by the territorial public service; in the Northwest Territories programs are operated by a field staff under the direction of two District Welfare Superintendents. Professional social workers are located at six regional centres and in five other communities. In smaller centres part of the program may be carried out by teachers, administrators or other officers of the Department. Program planning and policy development are centered in the Welfare Division in Ottawa under five sections: Family Services, Special Care, Corrections, Community Welfare and Linguistics.

The Family Services of the Welfare Division include two main functions: Public Assistance and Child Welfare. Northern Canadians receive aid in the same manner and in the same amounts as other residents of Canada under federal programs such as Family Allowances, Old Age Security, Old Age Assistance, Blind Persons' Allowance and Disabled Persons' Allowance. The social assistance program provides food, clothing, shelter and other items for persons who are in financial distress. The amount of social assistance for which any person is eligible is the difference between what he can obtain from all sources—including wages, the sale of skins or crafts, the value of country food—and what is required to maintain himself and his dependents at a level which safe-guards health and permits normal growth and development.

The Child Welfare Program provides for children whose parents are temporarily unable to care for them and for children in need of protection.

Care is provided in boarding homes, foster homes and Children's Receiving Homes. Small institutions for the care of children are located at Frobisher Bay, Fort Smith, Yellowknife and Churchill. Adoption services and services for unmarried mothers are also provided.

Both the Yukon and the Northwest Territories have approved in principle comprehensive corrections programs in each territory; these include maximum use of adult and juvenile probation and after-care services, and the provision of institutional facilities for those adults and juveniles requiring custodial care.

A great deal of preparation and planning has been done regarding these corrections programs. Medium security prisons are being built by the Federal Government in Whitehorse and Yellowknife. Construction is expected to be finished in August 1966, and the buildings should be operational before the end of the year. Mobile minimum security camps are being developed for each territory, near Yellowknife and Whitehorse. These should be operational at the same time as the medium security institutions.

The immediate development of temporary detention and treatment facilities for juvenile offenders was also approved and a unit is now completed at Fort Smith. It will become operational as soon as the necessary staff are recruited.

Probation services have already been initiated in the Yukon with the appointment of a probation officer last year. The service will be expanded in 1966 and a similar service inaugurated in the Northwest Territories.

Both the Yukon and Northwest Territories conducted staff recruiting programs for senior corrections personnel in February and March, 1966. Suitable candidates have been found for practically all the positions. They will take up their duties shortly and make all necessary preparations for the inauguration of corrections services in both territories this year. Further recruiting will be done in 1966-67 for intermediate and junior corrections institutional staff.

The corrections programs in both the Yukon and Northwest Territories are the responsibility of the territorial governments implemented and administered by territorial staff.

During the year, the development of the Eskimo Language Course for the benefit of non-Eskimo-speaking staff on northern duty continued and now constitutes 132 lessons, each 15 minutes in length, recorded on tape with the corresponding written material divided into eleven units.

There is a long way to go before the basic research is completed and the Eskimo Language Course is revised accordingly. Some 125 hours of language instruction, in the classroom and in the laboratory, were given to the Northern Service Officers in training in Ottawa.

A draft copy of an Eskimo dictionary consisting of some 4,000 basic words was compiled. Here also a great deal of work remains before it can be published. Many items peculiar to the Eskimo need to be illustrated in order to be meaningful to non-Eskimos. The basic research on the language will eventually result in the publication of a grammar.

Many literary items are being transliterated from recorded tapes and syllabic texts into the new orthography for publication. A diary, an autobiography, twelve folk tales and original stories have been produced by Eskimo authors.

Planning continues for the implementation of the new orthography as part of a widespread literacy program among the Canadian Eskimos.

Community Welfare Services provided programs that assisted Eskimo communities as a whole (or groups within these communities), to deal with local social problems such as unemployment, alcoholism, delinquency and poor housing.

A program was introduced under the auspices of the territorial government to provide low-cost accommodation for young single adults in various northern communities. In addition the young people will be given guidance and counselling services at these residences to help them develop the social attitudes and skills helpful in establishing their own homes. The first residence will be constructed at Inuvik in 1966-67, and will accommodate 50 young adults of both sexes.

The Community Development Fund, established in 1964-65 as a means of stimulating community initiative and reducing local unemployment, enabled a number of northern communities to undertake a variety of useful projects which were originated and carried out under local responsibility. Under this program \$82,500 was allocated to the Arctic District, and \$30,000 to the Mackenzie District. Communities undertook such physical improvement projects as the construction and operation of community bath houses; renovations to community halls; the construction of dog-corral, docks, community workshops, ice-houses; the provision of fresh water supplies and the establishment of supervised recreation areas. Locally-initiated economic development projects included the making of narwhal and fish nets, the collection of biological specimens,

the establishment of an experimental fox farm, a motor repair service and tourist facilities. Many similar activities are planned for the coming year.

Arrangements were completed for a program to be carried out under the auspices of the territorial government to reduce problem drinking in the Northwest Territories. Work will be conducted at the community level, and will aim at developing resources within communities that can be used by the residents for the prevention and treatment of problems associated with the abuse of intoxicants.

During the year a variety of activities, aimed at developing and sustaining various forms of cultural expression native to the north, were undertaken. Exhibitions of Eskimo art were arranged in the United States and Canada, and more are planned for the coming year. Assistance was requested by one of the prominent art-producing Eskimo communities to train young persons in carving and printmaking so that these arts would continue to flourish. The Eskimo language magazine, "Inuktitut", was published and plans for the coming year call for its expansion, improvement and more frequent publication.

With the co-operation of the Canadian Broadcasting Corporation, a number of radio programs were produced for transmission to the North on activities of the Branch in general, and on community welfare services in particular.

Increased opportunities for employment in the North and the development of economic projects by the Industrial Division have absorbed the majority of residents from the rehabilitation centres at Inuvik and Frobisher Bay. The centres were closed down in 1965. Other aspects of the work done by the centres—group counselling and community activities—are now being carried on under the Community Welfare Services Program.

Rehabilitation services of a specialized nature will be purchased from agencies in the south.

Medical Social Services are provided to alleviate the social problems of hospital patients and particularly Eskimos hospitalized in the south. Communication is established between the patient and relatives in the north and the patient and hospital staff. Pre-discharge planning is carried out, particularly for those having residual disabilities. The Department is responsible for the repatriation of Eskimo patients from the hospital to their homes in the north. Those awaiting onward transportation are maintained at government-operated transit centres at Frobisher Bay,

Churchill, Fort Chimo, Yellowknife, Cambridge Bay and Inuvik, and on occasion, in privately operated facilities in the provinces.

A small home for the aged is operated by the Department at Aklavik; services in institutions are bought for the aged at several locations in the territories from the Anglican and Roman Catholic Churches. Care for the aged was also provided through boarding homes.

A five-year program of care for the aged of all ethnic groups in the Northwest Territories was presented to the Territorial Council and approved. This program includes the construction of a 15-bed hostel at Yellowknife in 1966 and two smaller hostels at Hay River and Fort Simpson at a later date. Homemaker and boarding home care will be expanded.

Indian Affairs



An increasing number of Indian youngsters are enrolled in provincial schools. In 1965-66 the enrolment in provincial schools was 29,355 and in federal schools 32,040.

Indian Affairs

The 1965-66 fiscal year was characterized by change and growth—changes in the organization of the Branch, featuring decentralization and wider delegation of administrative authority and accountability, in order to further the progress of the Indian people more effectively; and growth in the numbers and scope of programs associated with their economic and social advancement.

Expenditure by the Branch from appropriated funds was considerably in excess of \$81,000,000. This was approximately \$17,000,000 greater than the aggregate for the previous year, and reflected the continuing expansion in Indian population, which is increasing at an annual net rate of about three per cent. The increased expenditure included some \$6,000,000 more for education, an additional \$2,000,000 for Indian housing assistance, and an increase of over \$4,000,000 in connection with the adoption of provincial standards of welfare assistance.

The Community Development program, announced in the previous year, completed a substantial part of its staff recruitment and training, and was entering the implementation stage on a wide front at the year-end. Community Development principles are being stressed in all fields of Indian activity with which the Branch is concerned. Training courses were given not only to newly-recruited officials who will be primarily concerned with this feature of the Branch operations but also to Agency Superintendents, Assistants, and other staff members from all areas of Branch administration. Courses and seminars will continue, as it is most important that community development principles and methods should be followed in all phases of the Branch's work.

The key position occupied by education was again indicated by the fact that the Education Directorate was allotted approximately one-half of all the funds voted by Parliament for the work of the Branch. The emphasis on attendance of Indian children at provincial schools with non-Indian students was again in evidence. More than 47% of all Indian students now attend provincial schools.

While increasing attention was paid to matters in the economic development field, other needs of the Indian people were not overlooked. A Cultural Affairs Section was established for the purpose of assisting in the preservation, growth and expression of Canadian Indian culture. Another significant development was the adoption by the Branch under its welfare program of the same rates and eligibility conditions for social assistance as those which apply to other recipients in those areas where the provincial rates formerly exceeded Branch scales. By this action the Branch ensured that Indians who find it necessary to accept social assistance from the Branch will receive at least the same level of benefits as non-Indians.

The extension of provincial services to Indians is encouraged wherever feasible, in order that existing services may be provided on the same basis to Indian and non-Indian alike, without unnecessary duplication. Some provincial services are already provided and others will be made available where the provinces agree to the necessary arrangements and the Band Councils wish to obtain them. This does not mean, however, that the Federal Government has any intention of avoiding or delegating its constitutional responsibilities.

Arrangements concluded with provinces during the year included a master agreement with Manitoba for the education of Indian children in joint schools; financial assistance to Newfoundland on an expanded scale to help in the Province's administration of Indians (and Eskimos) in Labrador; forest fire protection and suppression agreements with Saskatchewan and New Brunswick; an agreement covering cost-sharing of several Indian parks in Ontario under provincial legislation; a one-year renewal of a fur conservation agreement with Saskatchewan; and a handicraft production and marketing agreement with Alberta. Enabling agreements, to provide welfare and community development services, subject to Band Council approval in every case, were sent to Provincial Governments for perusal and consideration. The proposed agreements were under consideration at the year-end.

An extensive Indian Community Improvement Program was announced in March 1966, under which a minimum of \$112,000,000 will be spent from public funds over a five-year period to assist in providing better Indian housing, safe water supply and sanitation facilities, electrification of homes and improved roads. A housing survey disclosed a need for more than 12,000 new homes over a five-year period to meet a backlog of approximately 6,000 units and to take care of new family formations

of about 1,250 a year. The quality and other features of construction will also be improved. In addition to the public moneys, there will be contributions from band funds, individuals and other sources.

The Branch reorganization, already referred to, stresses delegation of responsibility wherever possible to the regional offices and in turn to the Agencies. The Agency Superintendent and the Band Council are regarded as a team working together for the improvement and well-being of the band, whether as a group or as individuals. Band Councils are being given the opportunity to assume an increasing measure of responsibility for the conduct and management of local affairs on their reserves, and a system of grants to bands has been introduced to facilitate this process. The Branch endeavours to improve direct services where desired and required by the Indian people; but where they can obtain necessary services in some other way, they are encouraged to do so.

The new Indian Affairs Officer series, which includes a training level as well as nine working levels to which employees may be promoted, has provided an improved pattern for career development. In the training process, the Community Development approach has been featured.

The Regional Indian Advisory Councils and the National Indian Advisory Board have already proved their value as consultative bodies in their respective fields. Band Councils will continue to be consulted by the Branch as before, on matters of direct concern, but the new organizations have filled a long-felt need for a regular and effective channel of communication between the Branch and the Indian people.

The new programs and approaches that have been introduced, and the expansion of existing programs, are indicative of the accelerated tempo of Branch activity. It is essential for the Branch to be flexible in meeting changing conditions if it is to play its full part in helping to overcome the problems of a rapidly-growing Indian population. While a good start has been made in this direction, a tremendous task still lies ahead, to help bring the average income of Indians up to the national level and to ensure that they have an opportunity to share in the social and economic development of the nation as a whole.

Under the reorganized structure, a directorate of planning has been provided, to draw up guidelines for setting long-term goals, clarifying priorities, and co-ordinating and adjusting programs. Throughout the organization, however, in the planning and implementing of programs, a paramount consideration will be to see to it that the Indian people are given every opportunity to determine their own destiny.

Federal-Provincial Relations and Indian Consultation

The October 1964 Federal-Provincial Conference on Indian Affairs indicated that further detailed discussions should be held with individual provinces regarding the extension of provincial services to the Indian people. During 1965, these discussions were carried forward with most of the provinces. As had been agreed at the Conference, formats of agreements for the extension of provincial welfare services and community development programs were completed and submitted to all the provinces and the Yukon and Northwest Territories for consideration. Discussions on the proposed agreements are continuing.

Closer liaison with the provinces was achieved during the year through the establishment of Federal-Provincial Co-ordinating Committees comprising provincial and federal representatives. Their function is to promote a better understanding of the respective objectives, policies and programs of the federal and provincial activities in this field. Committees are now actively functioning in Québec, Ontario, Manitoba, Saskatchewan, Alberta and British Columbia.

As a positive step towards achieving more adequate means of consulting with the Indian people, Indian Advisory Councils were established in the following regions: Maritimes, Québec, Ontario, Manitoba, Saskatchewan, Alberta, British Columbia and the Yukon, and the District of Mackenzie. Each Council is composed of a maximum twelve Indians elected for a three-year term by the bands and the major Indian organizations of the particular region. The function of the Councils is to advise the Minister on matters of broad policy, proposed legislation, federal-provincial agreements, the improvement of existing programs and proposals for the development of new plans and programs. During the 1965-66 fiscal year the Councils for the Maritimes, Québec, Ontario, Saskatchewan and Alberta met three times; those for Manitoba and British Columbia and the Yukon met twice; and that of the District of Mackenzie met once.

In addition to the Advisory Councils, a National Indian Advisory

Board was established to bring together Indians from all provinces. The Board, which comprises eighteen Indians elected for a three-year term by the Regional Indian Advisory Councils held its first meeting in January 1966. Its function is to advise the Minister on matters of national importance as distinct from matters of local or regional concern.

Social Programs

Community Development

Community development is a process designed to employ, to the greatest extent possible, all the available human and material resources in Indian communities in every province in Canada. It is anticipated that one of the effects will be to mobilize Indian initiative and promote self-sufficiency. An end result will be the accelerated transfer of responsibility and authority for the management of their own affairs to Indian communities with the concurrent withdrawal of government controls. Community development officers are being recruited and trained with the objective of promoting these changes.

In organizational terms, it is expected that this program will provide an important framework for co-ordinating and enhancing existing health, education, welfare and economic development services in Indian communities.

The Community Services Section is responsible for negotiating federal-provincial agreements on community development (including the processing of project area submissions); for developing and supervising grants standards controls; for developing and supervising leadership training for Indians (Indians are being trained for Indian Affairs Branch staff positions including community development personnel and for band "civil service" responsibilities); for establishing social and recreational organizations on reserves; for providing a secretariate for the Branch Community Development Committee and sub-committees; and for the preparation of a Community Development Newsletter.

The community development grants-to-bands program is designed to provide Indian communities with the means of managing their own finances to a point where they might function within some of the existing financing arrangements established for non-Indian communities. Scope is provided for Band Councils to plan their own programs and to execute them on their own initiative.

These grants are intended for purposes of employing band civil servants; community improvement—recreation, development of libraries, sanitation facilities and supervision; and to allow bands to participate in municipal cost-sharing programs. During the fiscal year 1965-66 the Indian Affairs Branch contributed a total of \$66,892 under this program.

As of March 31, 1966, the Indian Affairs Branch had approved grants of \$154,025 for project area developments in the Northwest Territories, Alberta, Saskatchewan and Manitoba. A shared-cost community development was also approved as a pilot project in British Columbia.

During the year two three-month staff training institutes in community development were conducted. The majority of the seventy-four persons who attended were community development staff but branch staff from other divisions and representatives from provincial and international community development programs were also included. Six ten-day seminars on community development were held in Alberta and Québec; each were attended by an average of thirty persons representing Branch and Regional Headquarters and Indian Advisory Councils. Regional Community Development officers attended a ten-day seminar in August and when assigned to field positions, they conducted a number of community development seminars in their regions. These seminars included regional and agency staff, staff of federal, provincial, municipal and voluntary organizations and representatives of Indian communities. At Branch Headquarters ten seminars in community development were attended by approximately 150 staff members.

Leadership training courses for Indians, first begun in 1954, continued throughout the year with the co-operation of provincial governments and university extension departments. These courses developed the leadership qualities of the participants who were Indian chiefs, councillors and other real and potential leaders on their reserves. A comprehensive study was initiated for the purpose of developing a curriculum for training Indians to participate more actively in band management, to assume greater responsibility in implementing community development programs and to make more effective contributions as members of Indian Advisory Councils.

Again this year the resources of Coady International Institute, St. Francis Xavier University, Nova Scotia were used and seven Indian students who attended the Social Leadership Course were sponsored by the Indian Affairs Branch.

Cultural Affairs

A Cultural Affairs Section was established in the Social Programs Division in June 1965, for the purpose of developing Indian arts and crafts; holding special exhibitions and projects, developing publications of interest to Indians and maintaining liaison with the National Film Board, Canadian Broadcasting Corporation, the National Museum and the National Art Gallery.

The general objectives of the Cultural Affairs Section are preservation, growth and expression of Canadian Indian culture. The purpose is twofold: a documentation centre will be developed through research and the compilation of books and archives; and a program will be established to help creative and performing artists and groups, associations and individuals interested in preserving Indian culture.

During the year documentation centre research was started and a number of books on ancient Indian lore were acquired. Material, when collected and classified, will be available to Indians and research students at large; a detailed listing is being compiled of documentary sources of Indian information throughout Canada.

The program of grants covers assistance to individuals and groups in the field of creative and performing talent with emphasis on the creative artist. Provision is made for assistance to painters, tribal artists, carvers, composers, poets and storytellers. Performing groups in the field of dancing, singing, pageant and drama will also qualify. Consideration will be given to groups whose preoccupation is the fostering of Indian culture.

The scale of assistance is flexible; each request, whether it be for financial assistance, technical advice or physical space facilities or any specialized type of support is considered on its individual merits.

During the fiscal year 1965-66 grants totalling \$17,195 were made.

Preliminary negotiations were started in regard to commercial exhibitions in Toronto and Montreal for painters and carvers. The feasibility of introducing library services for adult Indians is being studied. These would complement Indian reserve school libraries, and be of a nature compatible with the literary level and interest of the groups concerned.

The writing of a pictorial history of the Indians of Canada was undertaken in co-operation with the Centennial Commission. Other projects of a national character, for Indians, and in relation to Canada's Centennial Year, are being planned.

On March 23rd appointment of Andrew Tanahokate Delisle, Chief of the Caughnawaga Band of Indians, as Commissioner General of the Indians of Canada Pavilion — Expo '67, was announced. There had been a great deal of preliminary planning prior to that date. Estimated cost of the project, which will be met from Indian Affairs Branch funds, is \$941,000.

Welfare Services

The basic objective of Indian Affairs Branch administration is to assist Indians to improve their social and economic status through promoting and supporting socio-economic development programs on Indian reserves. One essential factor in achieving this long term objective is the provision of general welfare assistance and services.

The welfare program financed and administered by Indian Affairs Branch includes social assistance (food, clothing and shelter) which in the Northwest Territories, British Columbia, Alberta, Saskatchewan, Manitoba and Ontario is provided for Indians at the same rates and under the same eligibility conditions as apply to other recipients in these areas. The use of a scale of food assistance established by the Indian Affairs Branch continues in the provinces of Québec, New Brunswick, Nova Scotia and Prince Edward Island. Clothing and shelter assistance are available on the basis of individual need in these provinces.

In the field of child welfare, maintenance and protection services are provided for Indian children through agreements with the governments of Manitoba and Nova Scotia and 25 Children's Aid Societies in Ontario. Where child care services are provided on a voluntary basis, the Indian Affairs Branch pays the costs of maintenance of children in fosterhomes or institutions. In areas where services are not available through child care agencies, Indian Affairs Branch staff with the consent of parents or guardians arrange for care of neglected children outside their own homes.

The Indian Affairs Branch provides for maintenance of adults in homes for the aged and other institutions for physically and socially handicapped persons who need care due to senility or chronic illness but who do not require active medical treatment.

Rehabilitation services are provided physically and socially handicapped adults through agreements with the Alberta Tuberculosis Association, the Saskatchewan Society for Crippled Children and Adults and the Manitoba Sanatorium Board. The Indian Affairs Branch assumes financial responsibility for full maintenance and tuition on behalf of Indians

participating in up-grading and social orientation programs arranged by these organizations.

Current emphasis in the welfare field is directed towards Indian participation in welfare services and social benefits which are available to other residents of the provinces.

In addition to the welfare program for Indians financed and administered by Indian Affairs Branch, welfare services social benefits available include Family Allowances, Youth Allowances and Old Age Security administered by the federal government; programs financed jointly by federal and provincial governments such as Old Age Assistance, Blind Persons' Allowance and Disabled Persons' Allowance; specific programs established by provincial governments including Mothers' Allowances and Assistance to Widows and Unmarried Women in Ontario; Needy Mothers' Allowance in Québec and social assistance to Indian adults and abandoned Indian children in Nova Scotia.

Resources and Industry

Employment Programs

The Community Employment Program operated by the Branch is designed to provide employment as an alternative to direct relief for bands with insufficient funds to participate in the Municipal Winter Works Incentive Program. Other objectives are to improve the local economy by developing and marketing local resources; to orient Indians to wage employment and to acquaint Indians with the duties and responsibilities of self-government. Works projects may be undertaken at any time of the year which best suits the employment and economic needs of reserve residents.

During the period from April 1, 1965 to March 31, 1966, some 491 projects were undertaken at a cost of \$1,277,010. Of this amount, the sum of \$802,675 or 62.8% of the total expenditure was paid out in wages to Indian workmen.

An additional 113 projects at a cost of \$676,124 were financed under the Supplementary Federal Government Winter Construction Program on reserves situated within National Employment Service districts classed as areas of high winter unemployment. These provided a further 28,834½ man-days employment for Indian workmen.

Employment and Relocation

The movement of Indians from traditional pursuits to wage employment increases each year and through the combined efforts of Branch specialists, the National Employment Service and interested community organizations, 1,071 clients were established in off-reserve communities in continuing employment. An additional 4223 Indians were assisted to find steady jobs in urban or frontier industrial communities. The influx of Indians to urban areas is growing; during three months of this year some 200 requested placement assistance in our Toronto office alone.

The relocation program at Thompson, Manitoba continued to grow with some 25 families being established on a permanent basis. Steps were taken during the year towards transfer of the placement services extended by the Branch to the provincial authorities with a view to a joint program for Indian and Metis people. Withdrawal of branch staff was effected at the year's end and plans laid for a much expanded program during 1967.

Joint planning was undertaken and specific projects in placement and relocation were initiated during the year with provincial authorities in Saskatchewan and Alberta. In particular, attention was given to the La Ronge, Fort McMurray and Hinton areas. In northern Québec a joint approach was undertaken to improve housing and living conditions of Indians squatting at Matagami. Liaison was established with local mining and other employers with a view to Indians being placed in seasonal employment to supplement income from fishing and trapping, or in regular jobs for those who were capable of making the transition.

Once again branch staff were active in assisting Indians across the country to take advantage of casual or short-term employment. Approximately 11,301 were so engaged with the majority involved in agriculture, forestry and construction. To support the movement of almost 600 Indians from northern reserves in Ontario and Québec to agricultural work in southwestern Ontario, Indian leaders were hired to work with branch staff, National Employment Service and provincial authorities. In addition, a group of carefully selected young people were trained and employed as liaison officers to help the workers to adjust. The British Columbia and Alberta regions continued to employ special project officers to facilitate Indian employment on large construction and clearing operations in outlying areas, and to maintain liaison between the Indians and the employers.

Work experience is provided by a training-on-the-job arrangement under which the Branch shares the wages with the employer during a period of time agreed upon as being necessary to bring out the full earning capacity of the trainee. This assistance was provided to 71 clients in a variety of occupations. An additional 81 Indians, mostly business training students, were attached to various offices of government for orientation and job experience.

The field establishment for branch employment specialists was increased during 1965 from 16 to 37 and at year's end most of the new positions had been filled and programs initiated in a number of new centres.

Wildlife and Fisheries

Fur conservation programs were continued in co-operation with provincial and territorial administrations through formal agreements and informal arrangements. Assistance in the form of grubstakes, equipment and fur marketing was provided to Indian trappers to permit them to share efficiently in the fur resource harvest. Fur prices are much improved, particularly for long-haired species and current prices are substantially better than those realized over the past fifteen years. Buying interest originates mainly from outside the country and appears to reflect the fur promotional activities engaged in over the past few years.

The wild rice harvest in 1965 was one of the poorest on record due primarily to heavy rains and high water during the summer. Late spring frosts had a marked effect on wild berry crops, notably blueberries, resulting in low yields and high prices. Buyer resistance due to high prices has resulted in a substantial volume of unsold stock which will probably affect the 1966 market in both price and demand.

Several tourist outfitting projects, catering to sports hunters and anglers, were initiated in 1965. These projects include whale hunting at Churchill, goose hunting on James Bay, big game hunting in western Canada and speckled trout fishing in northern Québec. Financial, promotional and managerial assistance were provided to these projects and to other tourist and guiding operations. The Branch also co-operated with other agencies in training projects to provide guides for the tourist industry. In many respects this is a new program and it is too early to assess what progress has been achieved.

The domestic hunting and fishing program was continued in 1965 to assist Indians to obtain fish and game for food. Under the program fish nets, ammunition, camping and other equipment were provided to Indians who depend on these natural resources for a major portion of their diet. Organized hunting and fishing projects were initiated and transportation of the meat to the settlements was provided in several areas. Assistance was provided to several Indian bands in presenting appeals to the Supreme Court against convictions for game and fish violations. The application of the Migratory Birds Convention Act and Regulations to Indians has caused considerable concern in many areas of the country.

Programs to assist Indians to share in commercial fishing operations were continued in 1965. Several new fishing operations were started and considerable success was achieved in encouraging Indians to participate in

existing operations. Progress was also made where Indian fishermen assumed responsibility for packing and marketing their catch directly to the trade. A successful winter fishery was conducted in the Northwest Territories by a group of Indians who operated for the first time as independents. This was a co-operative project involving the Indian Affairs Branch and the Department of Northern Affairs and National Resources.

Indian inland fishery production exceeded 20 million pounds in 1965, and the 1964 production for Indian fishermen in British Columbia was valued at \$6,295,700 (latest figure available). Plans are progressing for a survey of Indian participation in the British Columbia fishery to determine what action may be required to maintain and enhance their traditional interest and competitive position in the industry.

Forestry

Forestry operations on Indian reserves continue to play an important part in the economy of most Indian bands. Timber dues from operations on reserves amount to \$1,031,279.39, representing a considerable increase over the previous year. There were 20 active timber licences, 15 in British Columbia, 4 in Ontario and 1 in Québec. No new timber licences were issued.

A forest management survey was conducted on the Nipissing Indian Reserve, Northern Ontario. Preparations were made for future forest surveys on the Dokis and Manitoulin Island Indian Reserves.

Approximately one million seedlings were planted on reserves in Ontario in co-operation with the Ontario Department of Lands and Forests.

Forest fire protection and suppression agreements were concluded with Saskatchewan and New Brunswick; negotiations were carried on for similar agreements with Alberta, Québec and Nova Scotia. There were no reports of serious forest fires on Indian reserves.

Operations on provincial Crown timber outside Indian reserves increased during the year, particularly in Alberta and Northwestern Ontario. A timber salvage operation was initiated at the Waterton Lakes National Park, Alberta, by the Peigan and Blood Bands. The fence post material produced was used for ranching purposes on these reserves.

Craft Industries

The estimated annual value of craft industries carried out by Indian people is \$1,300,000. The industry is largely self-initiated by Indian people

who carry out their own production and marketing programs with assistance provided by Indian Affairs Branch when requested. Many Indian people and groups in every province in Canada own and operate commercial operations based on native crafts. These include manufacturing and semi-manufacturing enterprises and craft retail outlets on Indian reserves.

To stimulate these industries where needed, Indian Affairs Branch provides financial assistance through loans and advances and operates a craft centre that buys raw materials in quantity for distribution to Indian people at cost. The centre carries out national promotional projects at buyers' gift shows at Toronto and Montreal. The centre initiated market research into export marketing at the California Gift Show. It also began an exhibitions program, loaning Indian crafts for displays at universities in Ottawa and Toronto. The centre distributed about \$60,000 in crafts to retailers during the year.

Headquarters provides technical guidance and other services when requested. Financial assistance was given to the famous Canadian Indian Committee exhibit at the Toronto Canadian National Exhibition. More than 200,000 people visited the display which included a portrait gallery of prominent Indian people, a National Museum exhibit of artifacts and a display of many products produced in Indian craft industries. The project was organized and carried out by a committee of Indian people; many Indian people from across Canada participated.

Technical and consulting assistance was given to several Indian groups with frequent field visits from coast to coast. Consultants were employed to assist with business problems in the Maritimes, Ontario and Saskatchewan.

A nation-wide competition was held among Indian students for the creation of a design suitable for registration as a trademark to promote Indian crafts. More than 1,400 Indian students responded with their entries. The first regional craft development and marketing organization was formed to serve Indian craft producers in Alberta and the Mackenzie District.

A study was initiated to examine markets for Indian crafts and propose guide lines for the future development by Indians of their craft industries.

Industrial and Business Development

During the year there was a significant increase in requests from

Indian people for assistance in establishing private businesses and co-operatives. Active negotiations took place in several regions for the development of industrial and processing industries based on the natural resources of Indian communities. The Branch assisted directly or indirectly in the establishment of several new Indian businesses, and conducted negotiations with several entrepreneurs wishing to establish production facilities on reserves.

Assistance has been continued to the Cape Croker Furniture Co-operative through the provision of temporary project management, and funds for a study of the market potential of the products.

A new emphasis was placed on the provision of functional supervision to Indian people in the process of establishing new businesses. For this purpose, feasibility studies, financial planning studies and related professional assistance was provided through consultants to La Ronge Industries in northern Saskatchewan, the Native Brotherhood of British Columbia for their Prince Rupert cultural and handicraft project and the Caughnawaga Band Council for their proposed centennial celebrations; assistance was provided for a variety of parks and other tourist attractions on or near reserves.

Assistance under present legislation continues to be confined to technical and professional services and revolving fund loans; this imposes severe limitations on the effectiveness of the Industrial and Business Development Program on behalf of the Indian people. Continued co-operation with provincial governments, as well as the Department of Industry, Department of Labour, Industrial Development Bank and other government agencies provided the means of assisting other Indian commercial enterprises.

The increasing financial resources available to the Indian people was studied and a substantial new program for the expansion of Branch assistance to Indian commercial and industrial enterprises (and to non-Indian enterprises on and near reserves) has been given concentrated attention.

Mineral Resources

Development of oil and gas resources on Indian lands continues at a high level of activity; revenues to band funds are estimated to exceed \$4,000,000 for the year, the sixth consecutive year of increase.

In Alberta, royalties are derived from one hundred and twenty-five producing oil and gas wells located on 10 different reserves distributed

throughout most of Alberta. Test holes on and near the Cold Lake Reserve have encountered a rich occurrence of heavy oil which has prospect for production in the future. Oil fields in the Lesser Slave Lake Agency area have extended their production.

Sales of oil and gas rights by permit and lease have brought substantial cash bonus payments to bands in Alberta. The disposals of rights for lands of the Slaves of Upper Hay River Band were of particular interest due to discovery of oil in the Rainbow area of northwestern Alberta. After many years of inactivity rights to reserves in Saskatchewan and Manitoba attracted attention from oil companies. Lands in the Meadow Lake, Touchwood, File Hills-Qu'Appelle and Portage La Prairie Indian Agencies were contracted out to companies for exploration.

Sales of oil and gas rights are now conducted at the office of the Supervisor of Minerals at Calgary, rather than at Ottawa as formerly. This change has served to stimulate the interest of the Calgary-based oil companies in the Indian lands, and to encourage Band Council representatives to attend sales of rights to their reserve lands and acquire an understanding of oil and gas management procedures.

During the year two Band Councils in Ontario took an active part in prolonged negotiations with companies interested in developing mining and quarrying prospects which will bring considerable employment and revenue benefits to the bands. Gravel and sand disposals negotiated with Band Councils throughout most regions were also appreciable sources of income to many bands.

Agriculture

The policy of the Branch is to develop agriculture on Indian reserves by providing financial assistance and technical and managerial advice (much of which is obtained by enlisting the support of federal and provincial advisory services).

Indians are encouraged to take advantage of agricultural potential where economically feasible and to develop their interests in livestock production, dairy farming, grain and crop farming and in other horticulture industries.

In agricultural areas, the people are encouraged to use services and assistance available under all legislative programs pertaining to land use and resource development.

Indian farmers are also encouraged to take part in educational training, embracing modern farming techniques and farm management.

Assistance is given with breaking, cultivating, fencing, irrigation and draining reserve lands; in the provision of seed, fertilizer, insect and weed control chemicals, oil and gas; and in the purchase of farm machinery, repairs, construction of granaries and veterinary services.

Indians are eligible for assistance under various national programs such as the Prairie Farm Rehabilitation Act (PFRA) to share in the benefits on the same basis as non-Indians. In the case of the Agricultural Rehabilitation and Development Act (ARDA), provision is made for the provinces to include Indian bands and lands in projects undertaken under this legislation.

The Branch operates a Rotating Herd Program for cattle as a means to introduce Indian farmers to the beef cattle industry. This program is particularly active in British Columbia, Alberta, Saskatchewan and Manitoba. Other financial assistance is given for agricultural activities by means of Revolving Fund Loans.

A general attempt has been made to develop an inventory of land use for all Indian reserves in Canada. However, in order to make a better assessment of land use potential a much more detailed land use survey program is needed; it is hoped to have this developed and in operation during the next two years. Various irrigation projects are underway in different parts of the country to provide adequate watering where necessary. Such projects often involve considerable capital investment, and pilot projects are under consideration.

Indian Housing and Community Improvement

The Branch construction program for 1965-66 provided for Indian housing construction and also for the construction of roads, municipal facilities, wharves, staff housing and various other aspects of the physical development of Indian communities. The amount originally provided from appropriation for Indian housing was \$3,000,000, which was subsequently increased by supplementary estimates to \$5,000,000.

Fifty-five community plans were completed by professional engineers, while other community plans were carried out by Branch staff. Many Band Councils availed themselves of the services of professional engineering consultants to develop plans covering various services.

In March, an extensive Indian Reserve Improvement Program was announced, to meet the backlog of approximately 6,000 homes which had been revealed by a housing survey completed at the end of the previous fiscal year, and also to meet additional housing needs brought about by new family formations which are at the rate of around 1,250 a year. The announced objective was to build a minimum of some 12,000 houses over a five-year period.

The anticipated minimum expenditure from appropriation over a five-year period was estimated at \$112,000,000. This includes \$75,000,000 for Indian housing (apart from band funds, personal and other contributions); \$10,000,000 for water and sewage facilities; \$7,000,000 for electrification; \$17,000,000 for roads and bridges; \$1,250,000 for community planning through services under contract; with the balance available for contingencies.

Education

The administration of educational services, under the Director, now falls into three divisions of administration, school supervision and vocational training. Headquarters staff is organized into these three divisions, each of which accepts responsibility for the development and coordination of educational policy and procedures through well defined channels to field staff of a specific portion of the program.

The supervision of classroom instruction came under considerable scrutiny during the year. The incidence of retardation would seem to indicate that the learning problems of the individual child have not received sufficient attention. At the same time, an increasing load of administrative duties heaped on to the school superintendent has tended to reduce the amount of time available for classroom supervision. To remedy this situation the school districts have been reorganized to equalize and reduce the work load of the school superintendent; language supervisors have been appointed in each region to supervise instruction in the language arts.

Federal schools are now organized into 38 districts under the administration of a school superintendent with a supporting staff of counselors and clerks. All schools were visited frequently by the school superintendent and as often as possible by the language specialist.

Considerable interest in the recently developed language arts program has been aroused among teachers in both federal and provincial schools. Marked progress is being made in the teaching of English as a second language to children entering school with little or no knowledge of English.

Despite the rapid advance of Indian education over the past ten years with respect to retention in school and high school enrolment, a wide gap still exists in these two areas between Indian and non-Indian students. Progress can be measured by the percentage grade distribution of Indian school children for the years 1956 and 1966 given in the table below. Comparison with a provincial distribution for 1965 indicates the differential which will likely be removed over the next five years.

Comparative Distribution of Enrolments

		Grades	
	I - VI	VII - IX	X - XII
1956 Indian enrolment.....	85.16%	12.10%	2.74%
1966 Indian enrolment.....	77.55%	17.45%	5.00%
1965 Provincial enrolment**...	58.31%	23.88%	17.81%

**This represents all pupils regardless of race in provincial schools across Canada.

The Branch provides school facilities for Indian children under the terms of the Indian Act either in federal schools operated by the Branch or in provincial public, separate and private schools. The trend toward greater enrolment in provincial schools has become more pronounced over the past decade, while the enrolment in federal schools has remained steady at about 32,000.

The total Indian enrolment increased from 57,265 in the previous year to 61,395. The actual enrolment in federal schools was 32,040 and in provincial schools 29,355.

The number of classrooms operated by the Branch was 1,275 in 405 schools. The number of one classroom schools was reduced from 150 to 134 by consolidation or the transfer of pupils to provincial schools.

Accommodation for an additional 2,522 pupils was purchased during the year at a capital cost of \$2,664,162. The Branch now has a total investment of approximately \$15,581,600 in provincial schools to provide for 15,550 pupils. This joint school program will continue to expand annually to meet the needs of Indian children who are able to attend provincial schools.

A general agreement was concluded with the Province of Manitoba giving Indian children the privilege of attending public schools; the Federal Government has agreed to pay to the Province a uniform tuition fee for these services. Manitoba is the second province to enter into such an agreement with the Federal Government. British Columbia was the first.

A survey of the beginner group in the federal schools shows that 3,839 out of 5,075 gave an Indian dialect as their mother tongue; of these 2,437 were categorized as fluent or fairly fluent in either English or French. The rise in the number of bilingual pupils entering school reflects the education of the parents and has very significant advantages for the children.

Through a program of educational assistance, the Branch provides grants to Indian students covering costs of tuition, supplies, maintenance,

transportation and personal allowances. This enables Indian students, who have the prerequisites, to obtain training at the vocational, technical and university levels.

A pilot project was carried out providing 15 married students with special allowances enabling them to have their families accompany them while in university or vocational training programs. This project will give married students the opportunity to obtain training at higher levels and prepare them for relocation.

To give impetus to the post-school training of Indian students, the Branch is developing a staff of Regional Superintendents of Vocational Training and Special Services and a staff of vocational counsellors whose responsibilities involve providing Indian students with vocational guidance, the development of training opportunities and the subsequent placement of graduates from courses into employment.

In developing training opportunities, Branch staff work closely with officials of Departments of Education and the Federal Department of Labour who are responsible for the implementation of programs under the Federal-Provincial Technical and Vocational Agreements. It is worthy of note that some provinces are taking programs under these Agreements to reserves.

During the 1965-66 fiscal year, the number of students in upgrading programs increased from 526 in the previous year to 726 in the current year. The number in vocational training programs increased from 994 to 1,244, and at the nursing, teacher training and university levels, the increase was from 132 to 173.

In addition to the enrolment of Indian students in formal courses open to the general population, there were other training programs of special interest. In British Columbia, at the Branch's Chilcotin Forestry School, students were accepted by the Province as apprentices; in Alberta, Indians were provided with training as community health workers; in Saskatchewan, training for the operation of heavy duty equipment was given on reserves; in Manitoba, several carpentry courses were conducted on reserves; in Ontario, a Guide Training Program was carried out in co-operation with the Provincial Government and in Québec, special arrangements were entered into with industry for training in forestry operations.

The Branch also conducted special training programs in the areas of fishery operations, family aides and janitorial services; other training courses were carried out in co-operation with the provinces.

Studies are in progress to determine numbers of drop-outs from formal schooling, numbers who completed vocational training and now employed, and the effectiveness of the upgrading programs.

Forty-seven scholarships were awarded at the close of the 1964-65 school year to students entering or in university, teacher training, nursing, vocational training, and cultural programs such as art and music. The scholarships ranged from \$250 to \$300 and are awarded in addition to tuition, supplies, maintenance and personal allowances.

In 1956, the Branch initiated a program designed to establish school committees on reserves and there are now 68 in operation. These committees assume responsibility in the areas of attendance, maintenance of school property and the organization of extra-curricular activities. In other matters, the committees act in an advisory capacity. Commencing with the 1966-67 year, the school committees will have responsibility for the administration of funds on an expanded basis.

The adult education program took an encouraging upward swing during 1965-66 with emphasis given to adult basic education. This program is directed toward providing adults with basic and functional literacy to the Grade 8 level.

Plans are to appoint Regional Supervisors of Adult Education to each region with the responsibility of implementing programs to upgrade the academic levels of the adult population, provide them with academic skills required for training in the vocational areas and uplift the standards of living generally.

The long-range program is to provide all adults with a basic education.

Experimental programs were carried out to determine the effectiveness of teaching materials, organizational techniques, methods of evaluation and data-gathering procedures.

In summary, the Branch carried out 145 adult education programs on various reserves, with a total enrolment of 2,753 students including 1,134 enrolled in adult basic education classes.

A total of 235 school construction projects were underway during the year—117 classrooms, 67 units, 39 other projects. Twelve temporary school facilities were provided to relieve enrolment pressures, particularly in northern Manitoba. School construction took place in areas where opportunities for joint education were not present.

Attendance of Indian children at integrated schools and development of centralized federal schools required that daily transportation be pro-

vided for approximately 16,700 pupils during the fiscal year for a total cost of over \$2 million. Five hundred separate agreements were entered into for these services; over forty per cent of them were made with contractors of Indian status.

During the 1965-66 academic year 1,499 teachers were employed in federal schools—433 in residential schools, 1,056 in day schools and ten in hospital schools. To provide educational services for Indian children who were unable to attend school during the regular school year, seven seasonal teachers taught in remote locations in Northern Ontario and Québec during the summer of 1965. In addition to regular academic classroom teaching duties, teachers were employed to provide programs in Home Economics, Industrial Arts, Arts and Crafts, Music, Physical Education and Adult Education. There were also teachers of special Terminal, Auxiliary and Remedial Education, Upgrading and Kindergarten classes. Counsellors provided educational and vocational guidance services for the benefit of Indian students attending provincial schools.

Female teachers were in the majority by 64.7 per cent. The number of teachers of Indian status employed by the Indian Affairs Branch was 114. One teacher from Québec has been on loan to the Department of National Defence to teach in a school operated for dependents of Canadian service personnel stationed in Europe. Agreements were made with provincial school boards in Ontario, Alberta and British Columbia to permit four Branch-employed teachers to teach in provincial schools, and five provincial school teachers to teach in federal schools. In co-operation with the External Aid Office the services of one teacher from Québec were loaned to the Department of Education in Senegal, Africa.

The turnover of teaching staff in the 1964-65 academic year was 27 per cent. Of those who resigned, 36 per cent accepted other teaching positions. Five were transferred to teaching positions in the Northwest Territories and Arctic Regions with the Northern Administration Branch. Ninety-one per cent of those who terminated employment were qualified teachers.

Revised regulations for the classification of teaching staff and a new salary schedule were approved retroactive to September 1, 1965. Higher salary rates for all professionally qualified teaching staff have been authorized. Payment of a salary rate above the minimum can be made to graduate teachers with no previous experience in those localities where the prevailing local minimum rates are higher than those on the schedule.

Administration

Over-all responsibility and authority for the administration of Indian lands, estates and band membership and for the provision of secretariat and support services rest with the Administration Directorate.

Estates

Estates administered and concluded during the year, totalled 690. The total of new estates opened for administration was 698.

Police and other reports of fatal accidents were reviewed in more than 100 cases and where third party liability was involved appropriate action was taken.

The estates of 599 mentally incompetent Indians and the assets under guardianship of more than 364 infant Indians were under administration.

Membership

Enfranchisements

There were 638 persons enfranchised during the fiscal year. Of these, 56 were enfranchised as a result of application for enfranchisement in accordance with Section 108 (1) of the Indian Act. The remaining 582 enfranchisements resulted from the marriage of Indian women to non-Indians in accordance with Section 108 (2).

Adoptions

The Membership Section is the unit responsible for dealing with the various provincial welfare agencies, parents and others, concerning the registration, enfranchisement and administration of funds of adopted Indian children. There were 165 adoptions of Indian children registered during the fiscal year. Of these, 122 were adopted by non-Indians and 43 by Indians.

Protests

The addition of 57 persons to membership in Indian bands was protested during the fiscal year ended March 31, 1966, in accordance with the provisions of Section 9 and 12 of the Indian Act. Decisions were made on 17 of these protests, in which 9 persons were declared entitled and 8 not entitled to be registered as Indians. The remaining 40 protests are under investigation. Decisions were also made on 29 protests which were received prior to the beginning of the fiscal year. Of these, 18 persons were declared entitled and 11 not entitled to be registered as Indians.

Band Reorganization

This unit is also responsible for dealing with amalgamation and division of bands and the formation of new bands provided for under Section 17 of the Indian Act. This includes an evaluation of the economic, social and political implications involved. One band was constituted during

the year from persons registered on a general list. In addition, two bands were amalgamated to form a single band.

Reserve Lands

Negotiations continued with the various provincial governments as to the assignment of lands to Indian bands, which is a requirement to meet Treaty obligations made with them. Acquisition of land in other areas was confined mostly to parcels required for housing, or to relocate a band closer to a centre of employment and thereby increase their chances of economic development, employment and schooling.

Rights-of-way for highways, and public utilities reflected the continuing expansion and improvement of provincial highway systems and the extension of facilities for the distribution of electric energy and telephone service. All these have added to the economic development of Reserves by providing access to isolated locations, power for home use and educational study, and freer communication to outside centres of employment.

A total of 1,315 new leases and permits, other than oil and gas were granted bringing the total number in effect to 8,511, with a revenue of \$2,033,703 which accrued to the Indian land owners.

Trusts and Annuities

Indian Bands funds held by the Government of Canada on behalf of 518 Indian Bands totalled \$28,534,364 at March 31, 1966. Of this amount \$25,133,695 was in Capital funds and \$3,401,269 in Revenue funds. Expenditures totalled \$8,112,628 as compared with \$7,550,527 in the previous year, and income totalled \$8,901,299 as compared with \$7,996,348.

The following is a comparative statement of some major items of expenditure as compared with 10 years ago:

	Year ended March 31, 1956	Year ended March 31, 1966
Cash Distributions.....	\$ 1,312,869.33	\$ 1,348,412.54
Housing.....	499,089.55	1,421,980.95
Band Property—Management..	513,547.45	1,143,894.66
Welfare.....	567,609.13	504,568.72
Agricultural Assistance.....	904,529.79	805,405.03
Roads and Bridges.....	387,785.29	470,658.81

During the year the Governor in Council issued orders pursuant to subsection (1) of Section 68 of the Indian Act permitting twenty-three bands to manage their revenue funds, eighteen of whom were authorized to expend their revenue funds in whole and five who at their own request were limited to only part of their revenue funds. The total number of bands operating under Section 68 of the Act for the expenditure of revenue funds at March 31, 1966, was 115.

Forty-nine applications were accepted for the Winter Works Incentive Program sponsored by the Department of Labour. The total estimated cost, met initially from Band funds, was \$656,500. The direct payroll costs approximated \$407,400 of which some 50% is refundable by the Department of Labour. An estimated 1,194 Indians were employed for approximately 35,178 man days. Typical projects concerned roads, bridges, streets, sidewalks, boundary fencing, Christmas tree propagation, water supplies, sewage, drainage facilities, parks and playgrounds, community halls and cemetery improvements.

Band Property Insurance

Fire insurance for a total coverage of \$5,383,225 is carried on 923 properties owned by various Indian Bands across Canada. New coverage and renewals totalling \$1,612,307 were arranged during the year at a premium cost of \$14,299.01 to the Trust Funds of the Indian Bands.

Band Loans

During the fiscal year, applications for loans other than housing were received from 70 Indians. Of this number 52 received loans which totalled \$77,043 the average loan being \$1,481.60. The sums advanced were for the following purposes:

<u>Purpose</u>	<u>Amount</u>
Farm Machinery and Equipment.....	\$18,975
Cattle.....	39,900
Horses, harness and saddles.....	2,650
Land and Improvements.....	2,100
Vehicle repairs.....	4,872
Basement and Furniture.....	2,000
Pigs, etc.....	2,000
Handicraft Store.....	2,600
Miscellaneous.....	1,996

A total of 43 band loans aggregating \$35,441.70 were fully retired during the year.

Personal Savings

At March 31, 1966, there was \$338,054 on deposit in Indian savings made up of 1,290 general savings accounts.

Annuities

Annuities totalling \$561,448 were distributed to 107,498 Indians in accordance with the various treaties. This includes payments on account of enfranchisement, commutation and arrears. The Government of Ontario refunded \$36,944 which was paid under Treaty No. 9.

Names and Locations of Regional Offices and Indian Agencies

<u>Name</u>	<u>Location</u>	<u>Name</u>	<u>Location</u>
MARITIMES	Amherst, N.S.	St. John River	Woodstock, N.B.
Miramichi	Chatham, N.B.	Shubenacadie	Micmac, N.S.
Eskasoni	Eskasoni, N.S.		
P.E.I.	Lennox Island, P.E.I.		
QUÉBEC	Québec City		
Abitibi	Amos		
Bersimis	Betsiamites		
Caughnawaga	Caughnawaga	Pointe-Bleue	Pointe-Bleue
Maniwaki	Maniwaki	Restigouche	Restigouche
Odanak-Lorette	Village des Hurons	Seven Islands	Sept-Iles
Oka	Oka	Timiskaming	Notre-Dame-du-Nord
ONTARIO			
Southern Ontario	Toronto	Sarnia	Sarnia
Caradoc	Muncey	Bruce	Chippewa Hill
Christian Island	Penetang	Six Nations	Brantford
Golden Lake	Golden Lake	St. Regis	St. Regis (Quebec)
Simcoe	Sutton West	Tyendinaga	Deseronto
Peterborough	Peterborough	Parry Sound	Parry Sound
Northern Ontario	Fort William		
Chapleau	Chapleau	Nakina	Nakina
Fort Frances	Fort Frances	Nipissing	North Bay
James Bay	Moose Factory	Port Arthur	Port Arthur
Kenora	Kenora	Sault Ste. Marie	Sault Ste. Marie
Manitoulin	Manitowaning	Sioux Lookout	Sioux Lookout
MANITOBA			
Clandeboyne	Winnipeg		
Dauphin	Selkirk	Nelson River	Ilford
Fisher River	Dauphin	Norway House	Norway House
Island Lake	Hodgson	Portage-la-Prairie	Portage-la-Prairie
	Island Lake	The Pas	The Pas
SASKATCHEWAN			
Battleford	Battleford	File Hills-Qu'Appelle	Fort Qu'Appelle
Carlton	Prince Albert	Meadow Lake	Meadow Lake
Crooked Lake	Broadview	Pelly	Kamsack
Duck Lake	Duck Lake	Shellbrook	Shellbrook
		Touchwood	Punnichy
ALBERTA			
Athabaska	Edmonton		
Blackfoot	Fort Chipewyan	Hobbema	Hobbema
Blood/Peigan	Gleichen	Lesser Slave Lake	High Prairie
Edmonton	Cardston	Saddle Lake	St. Paul
Fort Vermilion	Edmonton	Stony-Sarcee	Calgary
	Fort Vermilion		
DISTRICT OF			
MACKENZIE	Fort Smith, N.W.T.		
Aklavik	Inuvik	Yellowknife	Yellowknife
Fort Smith	Fort Smith	Fort Simpson	Fort Simpson
BRITISH			
COLUMBIA	Vancouver		
Babine	Hazelton	Nicola	Merritt
Bella Coola	Bella Coola	Queen Charlotte	Masset
Burns Lake	Burns Lake	Skeena River	Prince Rupert
Cowichan	Duncan	Stuart Lake	Prince George
Fort St. John	Fort St. John	Terrace	Terrace
Kamloops	Kamloops	Fraser	Vancouver
Kootenay-Okanagan	Vernon	West Coast	Port Alberni
Kwawkwalth	Alert Bay	Williams Lake	Williams Lake
Lytton	Lytton		
YUKON			
Yukon	Whitehorse		

Staff Development

The Indian Affairs Officer Series, now in its second year, is proving to be a major factor in enabling a logical pattern for career development in the service. It provides a level where training in the particular requirements in the job may be given and nine working levels to which employees may be promoted as their experience and other qualifications warrant. A positive effort has been made to insist that the Community Development approach be used by these officers in their work and this has increased their value to the Branch.

Indian Affairs Branch staff have participated in training as shown below:

Branch Letter and Report Writing (Correspondence) ..	36
Departmental Basic Supervision	9
Community Development.....	340

Civil Service:

Basic Administration Course.....	8
Cost Accounting.....	2
Intermediate Government Administration Course.....	3
Management Improvement Training.....	15
Secretarial Training Course.....	5
Language Training—French (1 hour-a-day).....	11
" (half day).....	1
" (full time).....	1
—English (full time).....	1

Approximately 7 staff members attended outside training courses of from 2 days to 2 weeks duration.

Training in Community Development principles has received major emphasis, with training courses and seminars as detailed elsewhere in this report. It is hoped by means of these courses the Community Development philosophy will permeate Branch operations in all areas and at all levels.

Nature and History



"Erratic" boulders, rounded by glacial action, are an unusual nature feature along the rock-bound shore line of north Beausoleil Island, Georgian Bay Islands National Park.

The National Parks

The full enjoyment of national park lands today must combine with their careful management for the use of future generations. The double-barrelled program for present and long-range use is the responsibility of park administrators and planners.

During the year under review, visitor attendance across Canada reached a record high of more than 9½ million people. This is nearly three times the attendance figure (3½ million) set ten years ago in 1955.

To meet the increased use of land and facilities, a number of studies were undertaken this year to plan recreation and development possibilities in various areas. Typical of these was the study at Fundy National Park where visitors are concentrated at the coastline. The proposed plan for Fundy would relocate the main road that follows the shore and restrict use of the old road to pedestrian traffic only. The relocated road would open up sunny higher ground to visitors, dispersing crowds from the coastal area (which is often foggy) and provide access to campground and boating centres on Wolfe and Bennett Lakes in the central portion of the park.

To enjoy to full advantage the natural features of the coastal park, visitors may attend guided hikes conducted by the park naturalist. Those outings along the shore offer opportunities for visitors to observe marine life left by the tides, which, at Fundy, are channelled into a narrow bay to reach spectacular levels.

Similar shoreline and land reconnaissance studies were undertaken in Cape Breton Highlands, Prince Edward Island and Terra Nova National Parks. In the western parks in the Rocky Mountains, land surveys were done mainly in areas bordering main highways to determine their recreation potential.

Preliminary surveys were also made in two provinces of areas that are being considered as possible national parks. In Saskatchewan, an area which includes habitat of a type suitable for maintaining herds of antelope

and buffalo; a colony of prairie dogs on the land would be protected in their natural habitat. If the area became a national park, an interpretation of the natural history of the area would be offered; visitors would use footpaths to see the unusual features of the park and the prairie animals in their natural habitat; campground and picnic facilities would be provided.

In Newfoundland, air and ground transportation was arranged by the provincial government to survey a potential national park area on the west coast. The area (about 300 square miles) is a striking example of the fiord-like coast; the alpine plateau included in the survey is almost Arctic in character. In addition to the scene of towering cliffs and blue fiord-like fresh water lakes, the area offers fresh and salt water fishing, boating and canoeing. The area would require new park management techniques and unusual visitor facilities.

During the year under review the number of campers increased even more, by percentage, than the number of visitors. More and more people who first came to parks for a daytime swim and picnic are returning with tents and trailers for holidays extending from weekends to periods of one or two weeks. The upward trend is expected to continue.

From the sum of \$552,502 spent on campground development in the fiscal year 1958-59, the estimates have risen to \$1,409,500 for 1966-67. An additional 10,000 individual sites are expected to be required by 1970, and to meet this demand, park planners are recommending an average of 2,000 sites each year.

To keep up with changing needs—in variety of accommodation as well as rising attendance—surveys were carried out to determine the type of camping equipment used and the type of facilities desired. In the spacious mountain parks where nights are cool, trailers are used extensively; in the central and maritime parks the tent is the popular form of overnight shelter. As tents expand in size and add screened-in porches, awnings and possibly a dining shelter, camping sites must be larger accordingly. Portable stoves for cooking (used by over 82% of the campers at Banff in 1963) are favoured over the wood-burning fireplaces provided on individual sites. The atmosphere provided by an outdoor fire is still a great favourite however and the day is not foreseen when outdoor fireplaces will be no longer used.

During the year studies were made of visitor use of park land and facilities at Kootenay and Yoho National Parks and in five National

Historic Parks in Nova Scotia and New Brunswick. The long-range plans for the spacious western parks is to establish visitor centres in areas of heavy use rather than services scattered at random along main park roads. Motels, restaurants, gas stations, general stores and serviced camp areas will be grouped together to give service to visitors. In some of the most heavily visited areas, already established townsites will offer an even more extensive variety and volume of services. At Prince Albert National Park, a preliminary master plan was completed for the Townsite of Waskesiu; studies were begun on long-range plans for the Townsites of Waterton in Waterton Lakes Park and Wasagamung in Riding Mountain National Park.

Beyond the visitor centres, spacious wilderness zones will remain undeveloped. Visitors who find recreation in walking on quiet woodland trails will move farther into the park on foot and spend the night in primitive shelters. The zoning concept is intended to keep scenic wilderness areas virtually unchanged for the enjoyment of future generations.

The conservation of park lands also depends on visitor understanding and appreciation of irreplaceable natural features.

At Point Pelee (an exceptional vantage point for the observation of bird migrations) a large, fresh-water marsh and a hardwood forest typical of more southern regions are unusual nature features. Here, in the summer of 1966, a nature centre, the first of its kind in the National Parks of Canada, will be opened to introduce the Park to the visitor. Its exhibits will interpret the formation of this sandpit by the action of winds, waves and currents. The visitor will learn that the Park is the most southerly point of mainland Canada and become aware of its peculiar flora and fauna. He will be encouraged to use the labelled trail through the woodland and to hike on the boardwalk, which extends above the marsh for more than a half-mile.

There will be a link with the past through exhibits, which tell of earlier visitors, such as the two Sulpician priests, Father Casson and Father Galinée, who, with their seven companion explorers, in early April, 1670, camped on the east beach. Father Galinée wrote:

"We landed there on a beautiful sand beach on the east side of the point. We had made that day nearly twenty leagues so we were very much tired. That was the reason we did not carry all our packs up on the high ground, but left them on the sand and carried our canoes up on the high ground.

During the night a severe storm had time to agitate the lake with so much violence that the water rose six feet where we were, and carried away the packs of M. Dollier's canoe that were nearest the water, and would have carried away all the rest if one of us had not awoke".

The natural history of Pelee (Pelee originates from *pelé(e)* meaning peeled or bare because of the absence of trees on the east shore) is based on change. Violent storms have been a characteristic of the Point for centuries. Tremendous winds tear at the sand bar, and topple the shallow-rooted trees. At one stage of its evolution, Pelee was much longer and in time it may build up again.

Within far-ranging Wood Buffalo National Park, the nesting grounds of the whooping crane were given protection against human intrusion and fire. Herds of buffalo were rounded up and inoculated; reactors to tuberculosis and brucellosis tests were culled. During 1965, for the first time in four years, no buffalo died as a result of anthrax as far as is known. A small herd of pure wood bison were captured and moved to an isolation corral at Elk Island National Park as part of a program to ensure the survival of this rare and interesting subspecies.

The transfer of 160 elk from Banff to the Spirit River area of Alberta was approved; fifty-four animals were shipped in 1965, and the remaining 106 will follow in 1966.

Interest in the natural history of the parks was stimulated by conducted hikes with parks naturalists and illustrated talks at the campgrounds in the evening. In parks where the naturalist had been appointed on a year-round basis, programs were presented to a total of more than 240,000 visitors.

Year-round use of the parks is encouraged by the Department; winter attendance is rising, particularly in the mountain parks where ski trails are attracting an increasing number of visitors.

At Banff the facilities at three major ski developments (Mount Norquay, Sunshine and the Whitehorn-Temple ski area near Lake Louise) were used by 140,000 skiers during the winter season 1964-65; this figure has risen from 18,000 in 1957-58.

The long-range plan for Mount Norquay is to develop it as a day skiing area with a capacity of 3,000 skiers. Sunshine Valley is planned as a self-contained alpine ski centre with overnight accommodation for 350 and skiing facilities for over 1200. During the year, the access road to the primary parking lot at Sunshine was widened and improved. Dis-

cussions were well underway for a major redevelopment of the Whitehorn-Temple ski area which is adjacent to the Lower Lake Louise Visitor Service Centre.

In Jasper National Park, ski trails on the Alpine and sub-Alpine slopes of the Marmot Basin were opened to skiers for the first time in the winter season of 1964-65. Access to the area was much improved by upgrading the standard of the existing road.

To develop and maintain ski centres, teamwork between Government and private enterprise is essential. The Department selects the area (with a knowledge of the natural features that may be endangered in clearing the slopes and opening the area to crowds), plans the development and installs utilities in the Visitor Centre if one serves the area. Ski operators develop and operate the ski runs, lifts, lodges and other facilities.

Over a period of time, leases on park lands now in effect, will be brought to a reasonably standard basis in order to meet the fundamental requirements for control of land in National Parks. It is intended to accomplish this with a minimum of disturbance to existing leaseholders.

Historic Resources

By the centennial year, the massive program to partially restore the Fortress of Louisbourg on Cape Breton Island will make a substantial showing. As work progresses, an increasing number of visitors are traveling to the area to watch the work from elevated walks and lookouts. During the summer 1965, 148,072 visitors came to Louisbourg; this figure compares with 113,000 in the 1964 season and 39,000 the previous year.

Activity was concentrated mainly at the Chateau St-Louis, one of the largest buildings in the world to be restored to original form. It will contain some 100 rooms, including the Governor's and officers' quarters to the left of the drawbridge gate and the soldiers' barracks and dungeon to the right. The original foundation walls have been dismantled and rebuilt to first floor level. Interior walls have been built to the height of the finished foundation and interior partitions have been partly installed. During the winter months, temporary plastic shelters were set up over the Governor's wing, the chapel area and the officers' quarters so that work could go ahead regardless of winter storms. A contract was awarded and work began on the construction of the masonry shell and installation of mechanical electrical work in the Chateau St-Louis.

Directly in front of the entrance to the Château St-Louis, the King's Bastion, strongest part of the fortification walls, is being reconstructed.

In the early stages of the restoration, the Royal Battery was excavated. This massive fortification is located on the coast over a mile from the Fortress. With the major emphasis shifted to the Château St-Louis, a concrete core wall was built along the outer walls of the Royal Battery to prevent its erosion by the sea until restoration work can be continued.

Mr. Maurice Berry, a distinguished and world renowned architect who specializes in the restoration and reconstruction of historic sites in France was appointed as a consultant to the Department on the Louisbourg reconstruction. During the year he inspected the historical reconstruction work at Louisbourg and met with officials and other con-

sultants to review progress and co-ordinate plans for further development. Mr. Jean Palardy, an authority on period furniture, continued research in Paris, France, on the furnishings to be used in the restored Château.

At the park headquarters and compound areas, fifteen buildings have been built; these include administrative offices; store houses for building materials—cement, lumber, flammable materials and cut stones; workshops for trades training, interpretation and artifacts research; archaeological research building; laboratory; fire hall; gate house; service station and yard office.

Roads have been built in the administrative complex; it is served by hydro-electric power and sewer and water facilities, including a 230,000 gallon water tank and a pump house. Sixteen houses and a four-unit apartment, two bunk houses and mess hall have been built to accommodate the staff which increases greatly during the summer months.

To satisfy the mounting interest of visitors, the Louisbourg Museum has been remodelled and its displays modernized. Four information centres with display exhibits have been built and two belvedere-type exhibit centres—one at the Dauphin's Bastion and the other overlooking the Louisbourg Lighthouse have been set up. A temporary visitors' reception centre has been prepared in a renovated country school. The booklet on Louisbourg was revised and introduced during the summer tourist season.

An estimated \$1.5 million was spent on the Louisbourg restoration during the year. The program will total \$12 million over the 12 year reconstruction period.

At the Halifax Citadel National Historic Park, preliminary plans were discussed for a major program to restore the Citadel to its original condition in the first half of the 1850's. In some areas, restoration will be complete and in others the existing remains will be stabilized. The extensive program will extend over a six to seven year period.

Archaeological excavations during the summer of 1965 at Côteau-du-Lac National Historic Park in Québec uncovered eighteen building foundations dating back to the early part of the 19th century. The building included the Commandant's House, officers' commissariat, octagonal blockhouse, two warehouses, hospital, powder magazine, carpenter shop, barracks for 288 men and the blockhouses that originally stood at each end of the canal.

A staff archaeologist will begin excavation of the canal and military buildings on April 15, 1966; most of the digging will be finished by mid-

June. A crew will remain at the site for the summer to complete the architectural recording of excavated structures. During the peak work period, the crew will include about 70 locally-hired labourers.

A new approach will be taken by the Historic Sites Division to present the history of Côteau-du-Lac. All masonry remains will be stabilized and remain open to viewers; the work is scheduled for completion by the spring of 1967. A scale model of the site is being prepared and will be installed in an information centre now under construction.

The original canal was built in 1780 at Côteau-du-Lac to bypass the dangerous stretch of rapids in the St. Lawrence River. Blockhouses were built at each end of the canal to defend it against American invasion. Over the years, various alterations and additions were made. Basically the site is a large earthwork fortification with the canal at its centre. The post was abandoned in 1851.

At Fort Lennox National Historic Park in Québec, archaeological excavation was carried out for the second season. Digging will begin again in June, 1966 to locate the French fortifications of 1759 and to excavate part of the late eighteenth century British fortifications and the early nineteenth century naval yard.

A third on-the-site summer course in archaeological field methods will be held at Fort Lennox in 1966 for university students majoring in archaeology. The course has recently been recognized by Laval University for academic credit; seven applicants have been selected for the coming summer.

A history of Fort Lennox has been prepared for distribution and a display "History of Artillery" has been installed in the Officers' Quarters which is now being used as a Museum building.

At Signal Hill National Historic Park, located at St. John's, Newfoundland, archaeological excavation was carried out in 1965 at the Queen's Battery and Lookout Point.

In the summer, 1966, excavation work will continue on the nineteenth-century signal tower, and a search will be made for the remains of earlier signalling establishments. The two-month program is expected to be the final season for excavation.

Signal Hill dominates the narrow harbour entrance looking out toward the fishing grounds of the Grand Banks. The present park includes some of the harbour defences constructed in the late 18th century and after.

A design is being prepared for a proposed visitors' centre by a consulting firm in St. John's. Displays to illustrate "A brief History of Signalling" and "A History of Signalling from Signal Hill" were set up in Cabot Tower.

At Beauséjour National Historic Park in New Brunswick a three-month excavation program will begin June 1966. Digging will concentrate on the buried structures and underground rooms located within the fort bastions. A one-month excavation program was carried out in 1965; it is likely that another season of work will be required in 1967.

The Indian village of Cahiague near Orillia, Ontario, will be excavated at the request of the Historic Sites and Monuments Board of Canada to determine whether or not the site is actually the Indian village of Cahiague described by Champlain. The contract for the small three-month excavation program has been awarded to the University of Toronto who have excavated at the site on and off for about ten years. Excavation is also being done on the Indian Burial Mounds in the Rainy River district of Ontario to enable the Historic Sites and Monuments Board to assess the national importance of the site.

At Lower Fort Garry, north of Winnipeg, the first season of a two-year archaeological program was carried out during the summer of 1965. The main areas excavated were the warehouse, barracks, palisade, troop canteen, blacksmith shop and kiln. In May, 1966, the University of Manitoba will start the second season of excavation under a two-year contract with the Historic Sites Division. The four-months dig will concentrate in the industrial and agricultural areas outside the fort proper.

In June 1966 the new Fort Garry Museum was officially opened. Exhibits on the ground floor tell the story of the early fort built by the Hudson's Bay Company about 1832. The culture of Indian tribes who lived in the northern territory served by the early Hudson's Bay Company is illustrated by displays on the second floor. Displays in the modern fire-proof museum were prepared by the Canadian Government Exhibition Commission from the very fine ethnological collection preserved by the Hudson's Bay Company.

Several years ago Rocky Mountain House near Red Deer, Alberta, was excavated by the University of Alberta. The trading post was built in 1799 by the North West Company, taken over in 1821 by the Hudson's Bay Company, and finally abandoned in 1861. During the year under review, the Department was negotiating a contract with the University to

carry out further excavation in the summer 1966. About twelve students will work on the project.

An underwater archaeologic survey was made in the Gulf of St. Lawrence in the summer of 1965 to determine the location of Walker's Fleet sunk in 1711. Five wrecks were found and a number of artifacts recovered.

During the year four new plaques were unveiled: Frenchmans Butte at Frenchmans Butte, Saskatchewan on June 29th; Rundle's Mission at Pigeon Lake, Alberta on September 12th; W. D. Lawrence at Maitland, Nova Scotia on September 11th; and Palliser Expedition at Banff National Park, Alberta on September 25th.

A contribution of \$20,000 was made to the New Brunswick Historical Society for the restoration of the Loyalist House in Saint John, New Brunswick. The Loyalist House, built prior to 1820 and occupied by the Merritt family, is historically important because it represents a particular age and federal style of architecture.

Other grants include \$50,000 to the Province of New Brunswick for the restoration of the Fredericton Military Barracks; \$27,500 to the Town of Perth for the restoration of the Matheson House in Perth, Ontario; and \$50,000 to the Nova Scotia Division of the Canadian Corps of Commissionaires in Halifax, Nova Scotia for the restoration of the Black-Binney House.

At Kingston, Ontario, the portico of the historic City Hall will be reconstructed; a contribution of \$100,000 was made to the City of Kingston. Built in the classical style of the day, the City Hall was regarded as one of the finest municipal buildings of 19th-century Canada. The portico built of Kingston limestone was 63' wide with four columns supporting the delicately wrought overhead portion. In 1958 the portico was demolished after it was condemned as structurally unsafe. It will be reconstructed under the guidance of the Historic Sites Division of the Department.

Wildlife



About seventy per cent of the continent's most hunted ducks nest and raise their young on the marshes, sloughs and potholes of the Canadian prairies. The Wildlife Service is solving the critical problem of leasing wetlands from prairie farmers.

Wildlife

The wildlife of Canada—from the powerful polar bear of the Arctic coastline to the colourful song birds of southern latitudes—is a rich part of the heritage of the Canadian people.

Vast stretches of Arctic and Alpine tundra and dense sub-Arctic forests account, in part, for the survival of many species of wildlife to the present day. Even in the remote north, however, excess hunting and the destruction of winter range by fire have drastically reduced the great migrating herds of barren-ground caribou.

National concern for wildlife was discussed at a meeting of the Canadian Council of Resource Ministers, the Federal-Provincial Wildlife Conference, and the Prime Minister's and Premier's Conference in July 1965. A National wildlife policy and program was developed and tabled by the Minister in the House of Commons on April 6th, 1966.

The Minister also announced that the Canadian Wildlife Service had been established as a separate Branch of the Department in recognition of the importance of the wildlife resource. The new national program provides for co-operative research and management with the provinces on common problems, establishes guide lines and goals for federal research programs and emphasizes the management of migratory birds and wildlife in the national parks, in the Yukon Territory and in the Northwest Territories.

For three years the Service has operated pilot projects in the west to lease wetlands from farmers and to find an adequate and workable method of compensating them to preserve marshes, sloughs and potholes as nesting for waterfowl. Some 70 per cent of North America's most hunted ducks nest and raise their young in the southern prairie provinces. Under agreement the farmer does not burn vegetation around his wetlands, or drain or fill them for ten to twenty years. He is paid in cash an amount based on the value of the surrounding land. About 75 per cent of the farmers who were approached during the initial stages of the program signed the agreements. In 1967 when administrative and legal questions

have been worked out, a ten-year program will begin to preserve about four million acres of wetlands at an annual cost of over \$5 million dollars.

An important aspect of the leasing program has been to find an acceptable way to share revenue produced by the wildfowl resource with the farmers. Ducks sometimes cause serious damage to grain crops, reducing the margin of profit. Provincial and federal crop damage insurance schemes are available, and wildlife officials are working closely with landowners to inform them of up-to-date methods of crop protection. An effective way of preventing crop damage is to provide alternate feed.

An additional \$400,000 will be spent annually for five years to acquire by long-term lease or purchase larger wetlands for nesting and overwintering areas in other provinces of Canada.

The present threat of habitat loss can be met in part by improving the productivity of the nesting grounds that remain. Habitat may be improved by controlling water levels, alternating natural plant cover, and creating nesting and resting sites where it is economically feasible. Studies are also under way to determine what sorts of foods are needed by ducks, particularly the young ducks.

Given adequate habitat, the regulation of game bird kill is the principal means of population control. A new aspect of waterfowl management in Canada will be the National Kill Survey to determine the number of hunters and the quantity and kinds of birds harvested in different areas. Hunters will be recorded by the institution of a Canada Migratory Game Bird Hunting Permit, and with their co-operation, wildlife officers will be better able to assess the effects of changes in bag limits, timing and length of seasons, and hunting zones.

At airports and on the airways increasing traffic has emphasized the importance of reducing bird hazard at airports. Bird strikes can cause loss of human life and although they have not yet caused casualties in Canada, damage to aircraft (particularly to jets) is counted in millions of dollars. A program for the management of birds in airport areas was prepared by wildlife officials and accepted by the associate committee on bird hazards to aircraft. The Wildlife Service directs the biological aspects of the program; to co-ordinating agency, with the Department of Transport and major airlines, is the National Research Council.

The most effective long-term solution is to make airports as unattractive as possible to problem species. During 1965, garbage dumps near major airports were closed; trees, hedges and shrubs were cleared

away; ditches were cleaned, ponds drained, and low-lying lands filled, levelled, and seeded. Grass was clipped to a calculated height: too short to provide cover for field mice or rabbits, which in turn attract owls and hawks; too long to provide a comfortable resting and feeding spot for gulls and waders. Gulls, which are involved in many bird strikes, are attracted to airfields by earthworms. Methods of ridding the grounds of earthworms are being studied.

Tape-recorded bird distress calls have been used with limited success to move birds off runways; exploding shotgun shells, flares and revolving searchlights have proved helpful.

In 1965, for the first time, radar was used to observe the location of large flights of migrating birds, and flying operations were plotted accordingly. One major airline had only about three-quarters as many bird strikes in Canada in 1965 as in 1964 under the same operating conditions.

Other wildlife research programs will include studies on factors affecting the health of wildlife populations such as parasitic infection, disease, pesticides and other environmental pollutants. By the end of 1966, twelve wildlife-biocide studies will be underway, including the investigation (begun in the summer of 1964) of the effect on wildlife of spray operations against the spruce budworm in New Brunswick. A study of the effect of orchard sprays on California quail in the Okanagan Valley will also be made.

The use of dieldrin for grasshopper control has been largely discontinued in the prairie province, but the possible effects of residues on waterfowl and other birds are being investigated.

In 1964, facilities became available to determine biocide residues in wildlife tissues, and early in 1965 a start was made on monitoring wildlife species for pesticide residues on a nation-wide scale. A National Registry of Pesticide Residues in wildlife tissues now contains records of nearly 4,000 specimens of Canadian source materials.

The radionuclide contamination of northern vegetation and animals is of concern to the Department. Radio-active material from the air is absorbed by lichens, a main food of northern caribou and reindeer. An initial program conducted by the Radiation Protection Division of the Department of National Health and Welfare shows the Cesium 137 levels are higher in Eskimos eating caribou meat, but that the amounts have not exceeded permissible levels.

Radio-active fallout is not associated with the marked decline of the

barren-ground caribou population. The 1955-56 census revealed that barren-ground caribou herds had dwindled to about 277,000 animals from 672,000 in 1949. In 1965 the herds numbered about 250,000 animals. Excessive human kill, the destruction of winter range by forest fires and poor calf survival during the years of bad weather are the major causes of the decline.

During the year an illustrated booklet in Eskimo, Chipewyan, English and French was distributed to hunters in the north to tell them of the need for conservation. Fire control will begin on one major caribou range in 1966.

The 1965-66 research program will evaluate range conditions, collect data on human use and herd structures and investigate certain physiological problems which bear on reproductive rate and calf survival. Beginning in April, 1966, the Wildlife Service plans to conduct an intensive two-year study of herds in Keewatin and northern Manitoba to provide data for management.

Other studies will determine how many reindeer can be supported by ranges in the Reindeer Reserve near Aklavik in the Northwest Territories, and the production of forage and its use by deer and moose in the forests of the maritime provinces.

In the Northwest Territories, studies continued on fur bearers, such as beaver, mink, muskrat, and on the polar bear, a species whose continued survival is of concern to many countries. During the year, the Service represented Canada at an international conference in Alaska on the preservation of the polar bear. Investigations on wolf ecology in the Northwest Territories were completed. A monograph on muskox, by Dr. John S. Tener, was published by the Service.

In the Yukon Territory, an intensive study of the grizzly bear is underway to obtain data required for sound management of the species. Also in the Yukon, a co-operative U.S.-Canadian investigation is being carried out in the Old Crow area and adjacent Alaska to determine the distribution, numbers, and taxonomic status of nesting white-fronted geese. Three specimens taken in 1964 were thought to be representative of the rare Tule goose.

In Fundy National Park studies were made of the importance of snow to moose survival. In parts of the Park, serious overbrowsing by moose occurred, followed by a sharp decline in the population.

For the first time in four years, no cases of anthrax were reported in

bison in Wood Buffalo National Park. Since the first outbreak of anthrax in July 1962, fast and extensive action has been taken to restrict the spread of the disease. Efforts are continuing to eradicate anthrax from the area.

Major investigations were under way on Arctic nesting geese—the black brant (Anderson River), small races of Canada geese (McConnell River) and Ross' goose (Perry River). At least three major publications will result from these studies. On the prairies, studies of the behaviour of shoveler ducks, feeding and nutrition of ducklings, and factors affecting reproductive success in waterfowl were in progress. Much time was devoted to rare species of birds that are few in number or in danger of extinction, notably the trumpeter swan and the whooping crane. Field studies of snipe were continued on the breeding grounds in Newfoundland and Ontario and on the wintering grounds in Louisiana.

The nuclei of research groups to study the effect of pesticides, diseases and parasites on wildlife have been established. More biologists with highly specialized training and knowledge are needed. During the year under review the Department gave six scholarships in wildlife biology; ten will be available in the coming year. The Department will also concentrate on aid to university research in wildlife biology by providing contracts totalling \$10,000 in 1966. Under the National Wildlife Program such contracts will eventually reach an annual total of \$50,000.

Central Services

Finance and Management

Early in 1965 a departmental Financial and Management Adviser and his Deputy were appointed to carry out the recommendations of the 1964 Management Study report. Several proposals, (such as the introduction of program budgeting) required the formation of new groups to handle recently delineated areas of responsibility. Management Services, and Materiel and Supply had assumed expanded roles; during the year the functions of the former Administration Division were revised and re-allocated in line with the new concepts of financial management. Planning and Estimates, and Accounting and Reporting units were formed. In addition to their normal operations, these units have designed and introduced a system of program budgeting and responsibility accounting in departmental headquarters. A re-organized Administration Unit expanded the co-ordinating and housekeeping duties originally assigned to the former Administration Division, and took charge of moving the Department's Ottawa offices into their new quarters in the Centennial Tower. With the Department now consolidated in one building, the Library also came under the Financial and Management Adviser. Finally in March 1966, a Computer Information Systems unit was formed. Staffing of the Financial and Management Adviser's office is nearly complete, and the organization is now better equipped to undertake the role for which it was designed.

Management Services

In common with similar units in most other federal departments, Management Services has suffered from a severe shortage of professional personnel. However a total of ten studies have been completed over the last year and potential annual savings exceed \$200,000. The major studies include one on personnel systems, another on native arts and crafts, and a municipal reporting system. The recommendations contained in six studies have already been implemented.

Management Services is now embarking on a program of work measurement, from which it is intended to develop work and staffing standards for management's use in the assessment of its operations.

Officers trained in various management analysis specialties (organization, systems and procedures, work study, work measurement, operations research, budgetary control and office mechanization) are being recruited. As the unit develops, it will provide an increasingly effective advisory service to assist in the solution of management problems.

Materiel and Supply

During the fiscal year the re-organization of the Materiel and Supply Division continued and its role was expanded from a basic purchasing organization to one with responsibilities in all aspects of materiel management—purchasing, warehousing, inventory control and distribution. This change was based on the concept that the Division now provides guidance on materiel management throughout the Department; at the same time fuller authority and responsibility is delegated to operational levels.

During the year, efforts were made to decentralize Materiel and Supply activities to field officers. The direct requisitioning of certain stationery and office supplies was done in the Natural and Historic Resources Branch. In the Atlantic and Western Regions plans have been made for purchase to be made through the regional offices of the Department of Defence Production.

With the gradual decrease in purchasing by Materiel and Supply, more time will become available for purchasing planning. Significant progress is expected in the use of the latest purchasing methods (using value analysis) in the coming fiscal year.

A study has begun on the distribution system for the Mackenzie District. Arrangements have been made to take over from the Indian Affairs Branch the procurement of equipment not purchased by the Branch or the Department of Defence Production.

Planning, Estimates and Analysis

The Planning, Estimates and Analysis unit was established in July 1965. Its purpose is to develop, recommend and introduce into the Department, budgeting policies (including standards of measurement) for use in

intermediate and long-range financial planning. The Division is also responsible for the analysis of estimates and long-range financial plans for purposes of senior departmental management and Treasury Board. A co-ordinating and consolidating function in the matter of estimates and financial forecasts is undertaken on behalf of the Department.

The Division provides an advisory service in financial planning to units throughout the Department and assists managers and other personnel in the development of budgets, forecasts and related data.

The introduction of program budgeting and responsibility accounting throughout the Department makes it imperative that objective standards and measurements be continually developed by the Division to serve in the effective preparation, development and analysis of financial plans.

Accounting and Reporting

This unit, organized in July 1965, is responsible for the design and implementation of systems for budgetary controls, management reporting, forecasting and other financial matters. It also provides the accounting service for the executive and advisory functions of departmental administration.

Since its inception the unit has provided historical data on expenditures compared with estimates; developed accounting systems; taken part in a pilot exercise in budget control and responsibility accounting; and developed new financial coding for management reports for the fiscal year 1966-67.

Administration

Considerable attention has been devoted during the year to re-organizing the Administration unit. The new organization reflects the changing role of Administration in the Department.

The unit is responsible for the development, recommendation and promulgation of administrative policies; and for the development of a system of manuals. It operates a number of central services for the Department including Telex and mail distribution facilities. The requirements of the Department for rented office accommodation across Canada is a responsibility of Administration. The unit also handles the administrative requirements of the Departmental Library.

Two areas which will receive emphasis during the coming year are

Manuals and Records Management, which includes the development of standards and introduction of work measurement into the operation of departmental registries.

Computer Information Systems

The Computer Information Systems unit was created to develop advanced techniques of information processing within the Department. It will also provide systems and programming services, both scientific and commercial, to the various Branches of the Department. The group became operative by the appointment of a Chief and one officer in March. Over the next few months other personnel will be recruited to handle the Department's immediate needs.

Projects undertaken will include the design of computer procedures to aid in the management of financial, personnel, material and equipment resources. The results of programs and activities will be evaluated by analyzing data in such areas as education, welfare and wildlife services. The statistical analyses of data and research techniques will aid in economic assessments of such natural resources as mining, oil and gas properties.

Departmental Library

As a result of a study by the Departmental Library Committee, the Northern Co-ordination and Research Library was integrated with the Natural and Historic Resources Branch Library at the time of the move to Centennial Tower. This centralization of library facilities has resulted in improved service, not only to the Department itself, but to agencies and individuals engaged in research.

The Library now has approximately 40,000 books and periodicals—including an outstanding collection of northern and Arctic books, a large number of volumes on wildlife and a Canadian historical collection comprised of books on historic sites, fine arts, antiques, glass, china and furniture. The archaeology section of this collection is now being enlarged and improved.

The services of the Library have been extended to provide bi-monthly accession lists; an improved loan system; a microfilm reader; and exchange service with other libraries. Facilities for individual study have been established in a well-furnished reference room as well as in private study areas.

Management Audit

This staff group was created in 1965 on the recommendations of the Peat, Marwick Mitchel & Co. "Management Improvement Study", to improve management practices within the Department. The study was conducted to explore findings reported in the Royal Commission on Government Organization and to advise on methods of implementing these recommendations.

Management Audit consists of a small staff, operating out of headquarters under the direct authority of the Deputy Minister. Its task is to analyze programs and activities of field offices, including all phases of management; appraisal of the organization structure, objectives, policies, systems, standards and controls and to report to the Deputy Minister on the effectiveness of management within the Department.

In the latter part of 1965-66 the group visited a number of field offices to become familiar with operations in the field. Following these visits, operating procedures for the Management Audit Staff were prepared. The aims of the group are to conduct a systematic cyclic review—and special reviews—of the whole organization to determine and advise the Deputy Minister on the effectiveness of the management.

Legal

The Legal Adviser and his staff are called upon to advise on a wide variety of departmental activities. Some matters, such as those to which the Claims Regulations apply, are required by law to be referred to the Legal Adviser. Many other matters are the subject of consultation.

During the fiscal year 1965-66, the liability of the Crown was a recurrent topic. Leases, contracts, permits, and licences were drafted almost daily in the Legal Adviser's office, as were submissions to the Treasury Board and the Governor in Council, Orders in Council, Regulations and Amendments to Regulations.

The Legal Adviser advised the Deputy Minister and senior officers on the legal implications of departmental policy and legislation. In some cases, he drafted legislation before it was discussed in detail with the Department of Justice. In matters which result in or which involve actions in the Courts, the Legal Adviser is liaison officer between this Department and the Department of Justice.

As the Commissioner of the Yukon Territory administers the government of the Territory under instructions given him by the Governor in

Council or the Minister of this Department, the Legal Adviser was during the year called upon for advice by the Deputy Minister, Assistant Deputy Minister and the Director of the Northern Administration Branch in connection with the Yukon Territory.

For the Northwest Territories the Legal Adviser's office provided a consultation service to the Deputy Minister and his staff, the Commissioner of the Northwest Territories and his staff for the Northwest Territories. In this capacity the Legal Adviser attended sessions of the Council of the Northwest Territories. He prepared drafts of territorial legislation and Orders and Regulations for the Northwest Territories.

Late in the fiscal year the management of the Indian Affairs Branch, the duties of the Minister under the *Indian Act* and all powers relating to Indian Affairs were transferred from the Minister of Citizenship and Immigration to the Minister of this Department. The management of the Water Resources Branch, the Resources Development Branch and the functions of the Minister of this Department under certain of the related legislation were, with some exceptions, transferred from this Department.

As representative of the Northwest Territories the Legal Adviser took part in the Conference of Commissioners on the Uniformity of Legislation in Canada. At the Annual Conference of the Canadian Bar Association the work of the Conference of the Commissioners on Uniformity of Legislation in Canada was assessed and the Legal Adviser participated in this Conference. A member of the Legal Adviser's staff took part in the Federal-Provincial Wildlife Conference.

The Legal Adviser participated in a seminar on International and Comparative Law arranged by the University of Ottawa. Early this year he was seconded to the Civil Service Commission to hear, as member of the Appeal Board, an appeal brought under the Civil Service Act.

Information Services Division

The Information Services Division works through the news media to keep the public informed about current programs of the Department.

During the year 203 releases were issued in French and English, to press, radio and television stations. In some cases, releases stimulated the interest of national publications and resulted in feature articles on various new and interesting aspects of the department's work.

The Division deals directly with the public by answering requests for information. During the year under review, 12,383 letters were received

(mainly from writers, students and editors), and 81,357 booklets, mimeographed articles and maps were sent out to answer these requests. The Annual Report was prepared in the Division; a total of 3,600—both English and French—were distributed to departmental staff, universities, libraries and the press. Feature articles were prepared for the annual editions of encyclopedias and handbooks and various general publications.

Public Information Officers attended the official opening of new Eskimo art collections to assist with publicity and promotion in Canada and the United States.

Five issues of the staff magazine "Intercom", including a special edition on the Indian Affairs Branch, were published and distributed by the Division.

The Division is directly responsible to the Executive Assistant to the Deputy Minister. It provides the Secretariat of the Departmental Publications Committee as well as a centralized information and editorial service.

Personnel

As recommended in the Management Improvement Study, the Personnel Adviser undertook, during the fiscal year 1964-65, a two-phase reorganization of the Departmental personnel services. Step one, which consisted in the recentralization of the personnel functions to each Branch, was completed before the end of the fiscal year. Step two, a study by the Management Services Division of existing personnel systems, paper work and procedures, was completed by June 1965. The basic recommendation of the study was the adoption of a system of electronic data processing for personnel records.

In the summer of 1965, this Department, together with the Central Data Processing Service Bureau began implementation of the new Personnel Data System. The initial conversion of position data and basic employee data to a form in which this information could be processed automatically by a computer has been completed. These data are recorded on magnetic tape and constitute the Master Establishment File. The procedure for updating this file has been established, and the system is at present capable of providing the line managers and the personnel administrators with the accurate and current establishment information they require. The second phase of the system is the creation of the Master Employee File which will contain detailed information about each employee. From this file employee reports can be produced; these are essential to line managers, personnel administrators, and manpower planning. It is expected that this phase will be completed by September, 1966.

Staffing

The position strength of the Department as at March 31, 1966, was as follows:

	Classified Positions		Prevailing Rate	Grand Total
	Ottawa	Field	Positions	
Dept'l Admin.....	199	14	213	1
Resource & Economic				
Develop. Group.....	33	24	57	1
Natural & Hist. Res..	222	702	924	1,890
Indian Affairs.....	309	2,538	2,847	46
Northern Admin.....	350	740	1,090	514
	<u>1,113</u>	<u>4,018</u>	<u>5,131</u>	<u>2,452</u>
				<u>7,583</u>

The grand total of 7,583 positions represents an increase of nearly 3,000 positions. The majority of these were added by the transfer on January 1, 1966 of the Indian Affairs Branch to this Department. During the year there were 807 new appointments to the classified staff and 538 separations. The Department conducted 135 promotional competitions and the Civil Service Commission held 254 competitions on behalf of the Department. These figures include the staffing activity of the Indian Affairs Branch. The graph on page 132 shows the growth of the Department over the period from March 31, 1956 to March 31, 1965.

Manpower Planning Development and Training

This year 27.75 man years were spent on training activities. These are outlined in bar graph form on page 133.

Two staff members spent much of their time assisting with the development of a manpower inventory system and the development and testing of an employee evaluation program which will be implemented in the year ahead.

A comprehensive development program for Junior Executive Officer and Junior Officer was carried out at both Ottawa and in the field for twenty-six staff members.

Language Training

During the year under review the Language Training Centre continued to expand to make further provision for other departments and agencies. An arrangement was made with the Civil Service Commission to begin a phased transfer of the program to the Civil Service Commission

starting in September, 1965 and continuing until April 1, 1967 when the program will be transferred fully to the Civil Service Commission. In the interim period the program would remain under the administration of the Department.

In the spring term, attendance in the French language program was 190, including 33 from other government departments and agencies. Fall term attendance was 367, including 253 from other government departments and agencies.

Instruction was carried out at three levels: beginners, intermediates and advanced students. The most modern audio-visual techniques were used in classroom instruction and these were supplemented by individual and group practice in the language laboratory.

During the 1965 fall term courses in English as a second language were started with 137 students in attendance; 102 students were from other government departments or agencies. Plans were made to further expand this program for the 1966-67 academic year.

With respect to Eskimo language training, the school continued to aid Northern Administration Branch in development of teaching and language laboratory materials and supervised the operation of the language laboratory for teaching Eskimo to federal employees who were to be employed in northern Canada.

Plans were made for the school to operate a special crash program in the teaching of Spanish. This program, to be operated in conjunction with the Civil Service Commission, was to meet a particular need for a Latin-American conference which will be held in Ottawa late in 1966.

Appendices

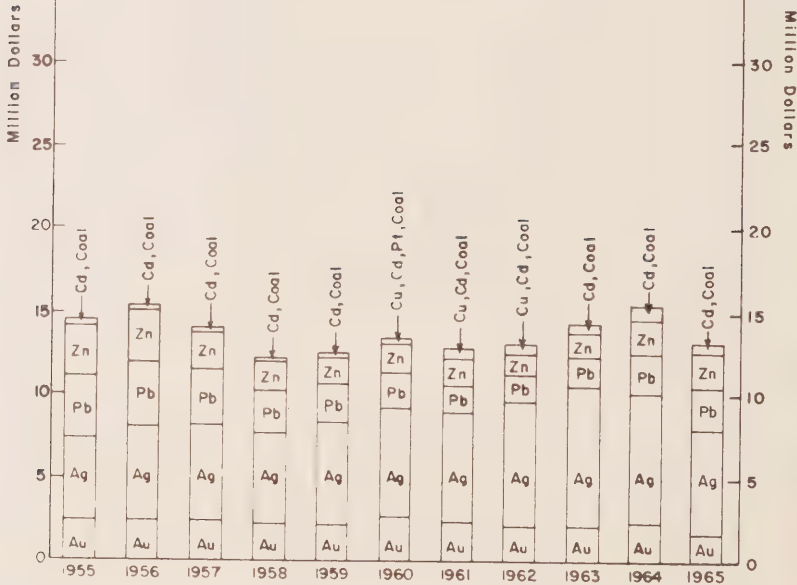
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VALUE OF MINERALS PRODUCED

YUKON TERRITORY

LEGEND

- Au - Gold
- Ag - Silver
- Pb - Lead
- Zn - Zinc
- Ni - Nickel
- Pt - Pitchblende
- Cu - Copper
- Cd - Cadmium
- Pt - Platinum
- Ta - Tantalum

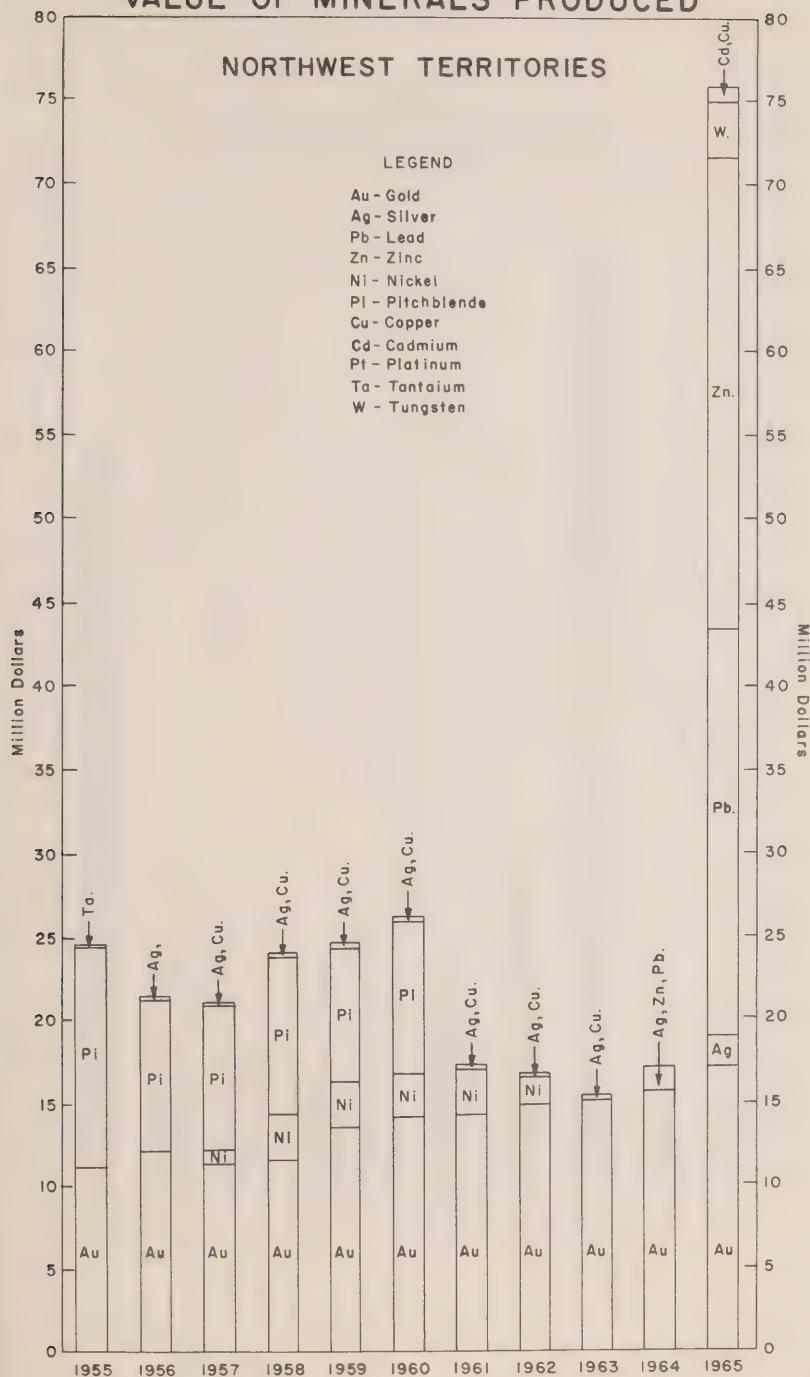


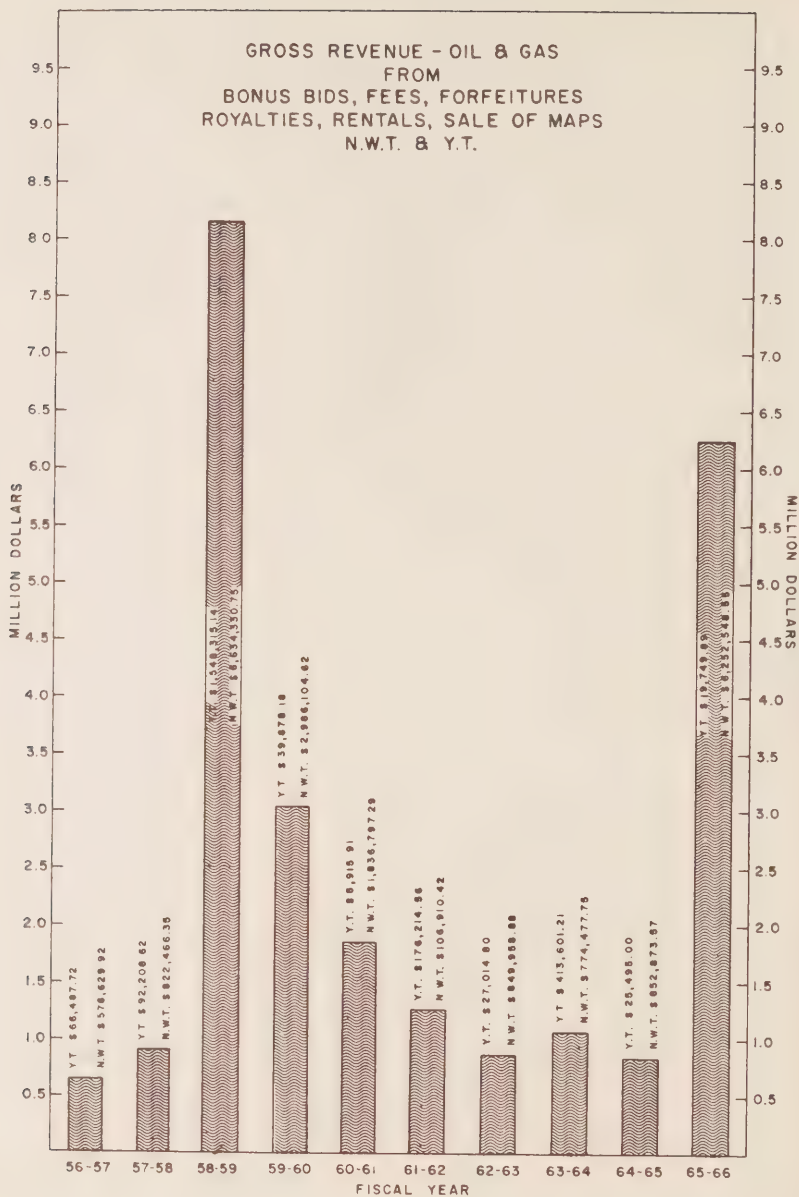
VALUE OF MINERALS PRODUCED

NORTHWEST TERRITORIES

LEGEND

Au - Gold
 Ag - Silver
 Pb - Lead
 Zn - Zinc
 Ni - Nickel
 Pl - Pitchblende
 Cu - Copper
 Cd - Cadmium
 Pt - Platinum
 Ta - Tantalum
 W - Tungsten

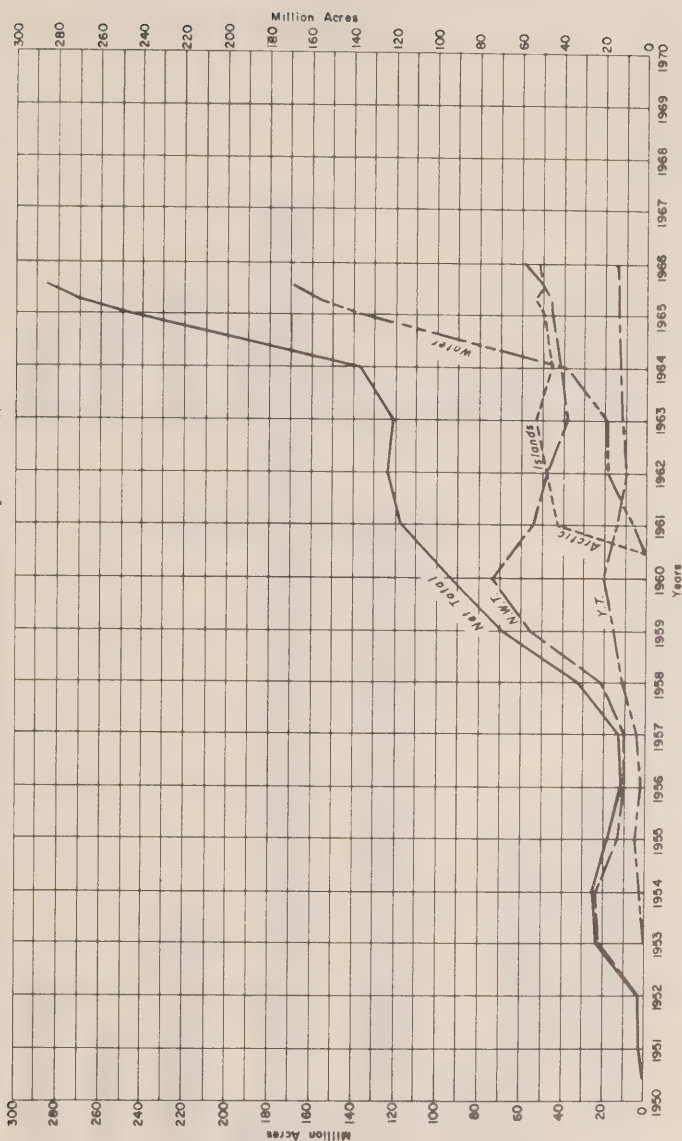




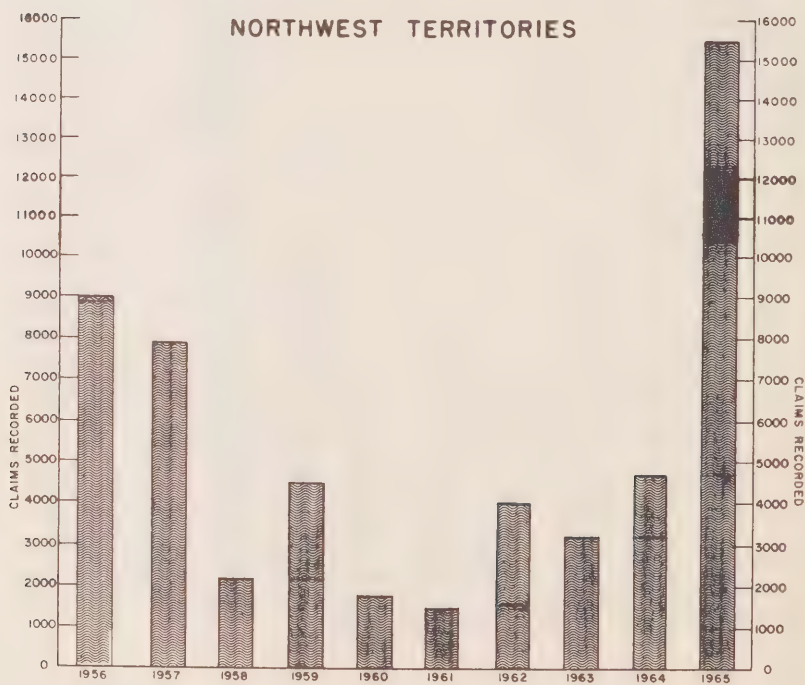
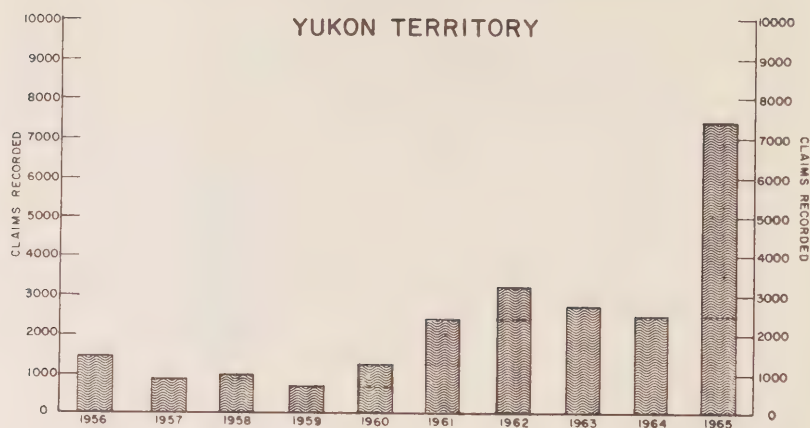
ACREAGE HELD UNDER OIL & GAS PERMIT

CANADA LANDS

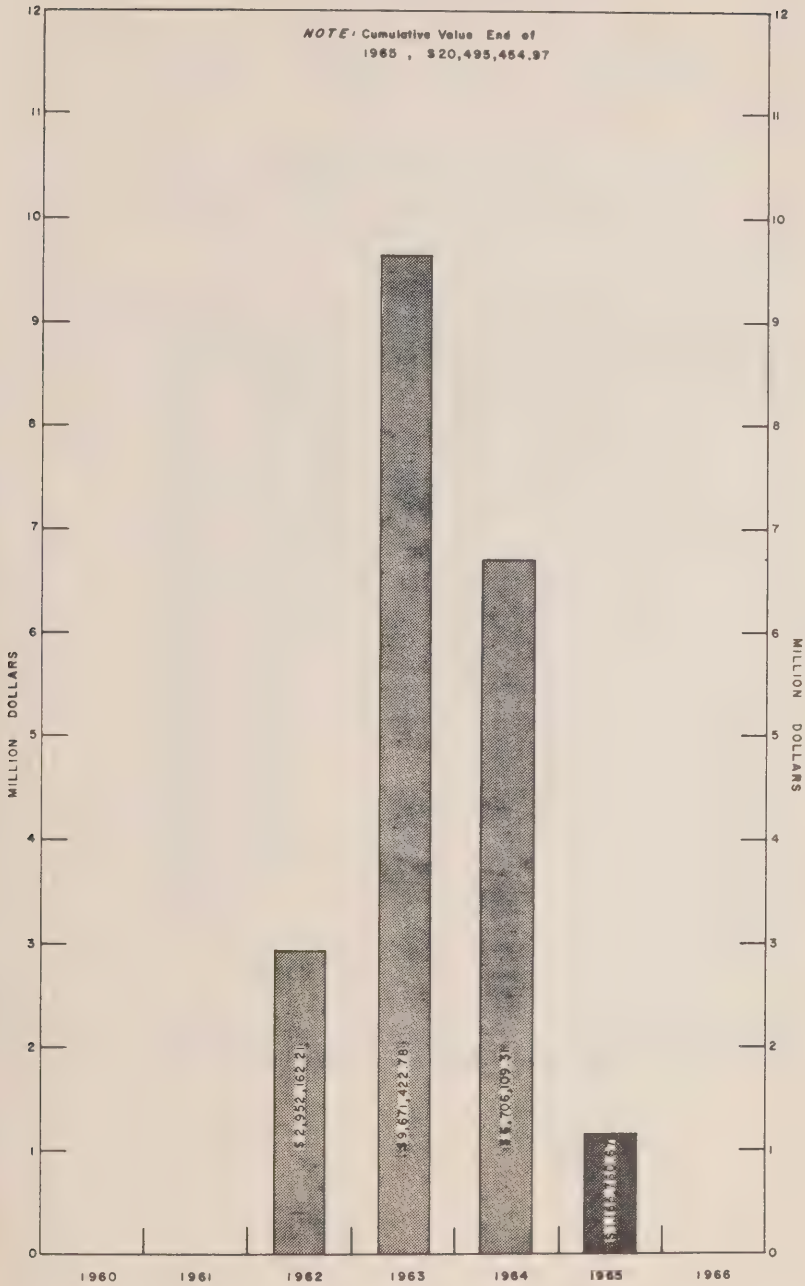
- NORTHWEST TERRITORIES PERMITS
- ARCTIC ISLANDS PERMITS
- WATER PERMITS
- YUKON TERRITORY PERMITS
- NET TOTAL (Excluding Reservations)



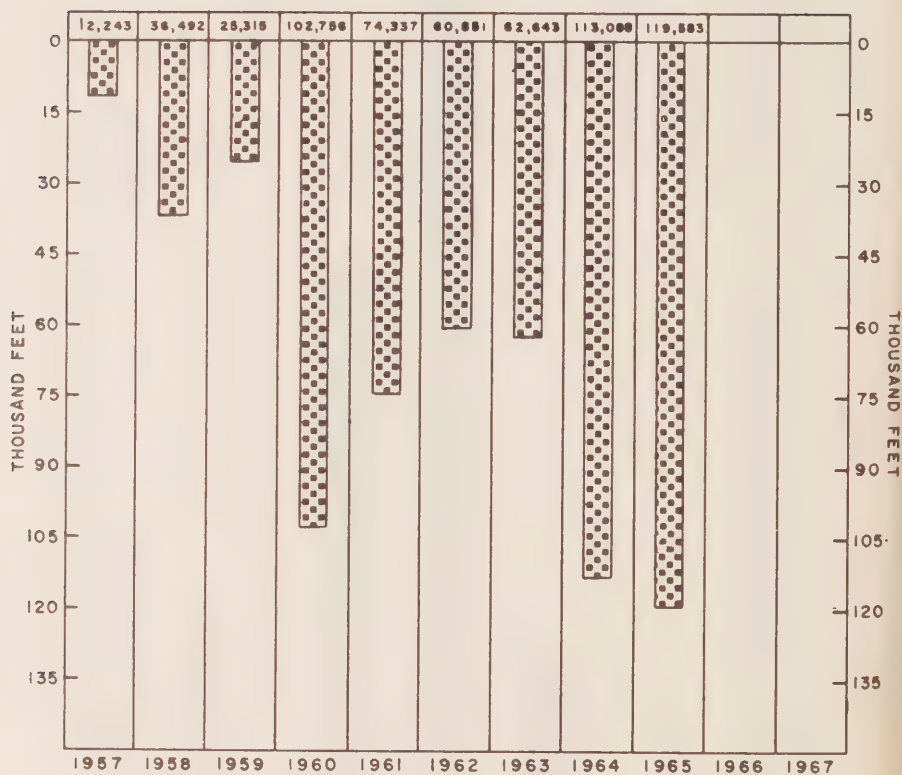
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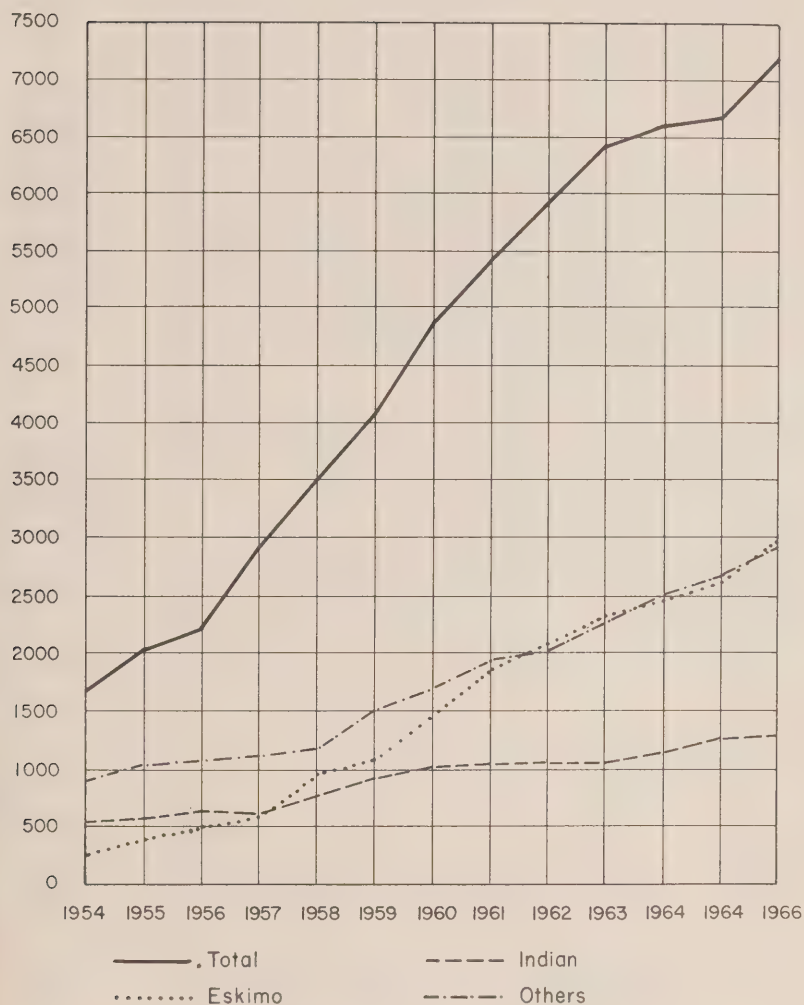
VALUE OF WORK BONUS BIDS



FOOTAGE DRILLED
YUKON, NORTHWEST TERRITORIES
& ARCTIC ISLANDS



SCHOOL ENROLMENT GROWTH



School enrolment—March 31, 1966—Mackenzie Education District

School	Type	Ca- pa- city	No. Teach- ers	Classrooms		Enrolment by Status						Enrolment by Grade or Class												Religion		Total Enr't			
				Elem.	Regu- lar	Sp.	Eskimo		Indian		Other	VT	AU	1	2	3	4	5	6	7	8	9	10	11	12		RC	Prot	
							M	F	M	F																			M
Aklavik.....	FDS	150	7	5	1		34	33	9	14	25	19			38	9	16	22	8	22	12	7				16	118	134	
Cambridge Bay....	FDS	75	3	3			25	26			5	4			25	10	14	5	3	3						5	55	60	
Coppermine.....	FDS	75	4	*4			42	47			2	7			40	18	18	14	4	4						11	87	98	
Discovery.....	COMP	25	1								5	5			1	2	2					1				5	5	10	
Fort Franklin.....	FDS	100	4	2	1				36	49					29	7	12	14	12	6	3	2					85	85	
Fort Good Hope....	FDS	50	2	2					16	21	5	2			13	7	6	5	8	5						44	44		
Fort Liard.....	FDS	25	1	1	1				12	9	2	2			12	4	5	2	2	2						21	25	25	
Fort McPherson....	FDS	200	9	7	1		2	1	42	73	15	25			30	33	14	18	23	11	21	10				45	47	138	
Fort Normand.....	FDS	50	2	4					15	18	8	6			21	9	2	7	13	11	8	6				21	156	178	
Fort Providence....	FDS	100	4	4		1			25	36	12	9			19	9	2	7	13	11	8	6				45	47	182	
Fort Resolution....	FDS	150	7	5					22	18	48	58			23	31	28	18	12	16	12	6				145	1	146	
Fort Simpson.....	FDS	325	18	11			5	5	82	40	43	32	44	31	82	40	43	32	44	31	23	17	13			229	96	325	
Fort Smith.....	FDS	725	38	21	9		6	1	95	104	254	227			106	78	82	63	55	59	38	29	39	38	19	22	519	168	657
Gjoa Haven.....	FDS	40	2	2	6		6	6	3	4	149	136			17	5	9	2	1	29	27	29	18	24	17	8	40	252	
Hay River.....	FDS	300	16	6	6		15	21	55	63	213	221			27	5	4	2	2	67	63	42	51	42	32	19	345	573	
Holman.....	FDS	50	2	2	15		187	179	4	9	2				242	92	97	84	76	67	63	42	51	42	32	19	345	573	
Inuvik.....	FDS	900	50	25	7		6	5	2	6	3	1			4	3	2	6	4	3	1					23	23	23	
Jean Marie River..	FDS	25	1	1					12	11					5	3	2	6	4	4	1					23	23	23	
Nahanni Butte....	FDS	25	1	1							13	11			9	3	3	1	2	4	4					18	18	18	
Norman Wells.....	FDS	25	1	1							37	27			13	13	9	10	8	4	6	1				13	13	13	
Pelly Bay.....	FDS	25	3	3					49	46	11	7			55	15	16	14	1	6	3	3				111	51	64	
Pine Point.....	FDS	75	3	3											1	2	4	3	1	2						11	13	13	
Rae.....	FDS	100	4	4			6	7	21	15					16	7	8	5	3	2						36	36	36	
Reindeer Station..	FDS	25	1	1											24	2	3	3	2	4	4	2				36	30	34	
Snowdrift.....	FDS	25	1	2											31	19	17	20	8	5	3	4	2			27	78	105	
Spence Bay.....	FDS	50	2	2	1		13	21	2	1	2	3			6	5	3	2	4							27	29	31	
Tuktoyaktuk.....	FDS	150	6	2			54	43	2	1	12	19			3	7	3	3	2	4						14	3	17	
Tungsten.....	COMP	50	2	2					7	10					3	7	3	3	2	4						10	14	3	
Wrigley.....	FDS	25	1	1											109	46	46	48	394	338	225	160	122	163	114	80	101	144	
Yellowknife.....	FDS	400	26	2	10		17	17	32	30	87	62			120	106											14	3	245
Total Fed. & Comp.		4340	220	127	50		451	431	541	638	964	896			892	466	448	394	338	293	225	160	122	163	114	80	1980	1941	3921
TOTALS.....																													
MUNICIPAL																													
Hay River.....	SEP.	175	8	5	2	3			8	18	83	92			45	23	32	26	21	14	16	14	10			190	11	201	
Yellowknife.....	PUB	650	23	15	5				25	14	126	129			56	58	52	49	48	49	30	33				22	411	433	
Yellowknife.....	SEP.	300	16	8	7	4	3	6	25	32	438	425			65	60	32	33	19	22	17	21	15	8	3	296	7	303	
Total Municipal....		1125	47	28	14		3	6	33	32	438	425			166	141	122	111	89	84	82	65	58	8	3	508	429	937	
Total Mackenzie....		5465	267	155	64	51	454	437	574	670	1402	1321			120	106											2488	2370	4858

*Coppermine includes 2 Temporary

School	Type	Ca- pa- city	No. Teach- ers	Classrooms		Enrolment by Status						Enrolment by Grade or Class												Religion		Total Enr't					
				Elem.	Sp.	Eskimo		Indian		Other	VT	AU	1	2	3	4	5	6	7	8	9	10	11	12	RC		Prot				
						M	F	M	F																			M	F	M	F
Arctic Bay.....	Fed.	25	1	1		14	23						1			27	3	3	4	1								38	38		
Broughton Island.....	"	50	2	2		26	25									22	14	6	6	3								51	51		
Cape Dorset.....	"	100	4	4		41	41						2			23	23	12	3	2	1							87	87		
Clyde River.....	"	25	2	2		24	10									21	11	2	3									34	34		
Frobisher Bay.....	"	375	19	14	1	3	108	128					32	45		15	115	55	42	28	23	20	6	5	3	1		47	266		
Grise Fiord.....	"	25	1	1		17	16									23	6	2	2									33	33		
Iqloolik.....	"	75	3	3		39	29						1			32	18	10	7	2									61	61	
Lake Harbour.....	"	25	1	1		8	8									9	5	1	1									16	16		
Padloping Island.....	"	25	1	1		8	10									6	6	9	3									18	18		
Pangnirtung.....	"	100	4	4		43	54						5			76	8	17	2	1								104	104		
Pond Inlet.....	"	75	3	3		38	29									26	19	8	10	3	1							67	67		
Resolute Bay.....	"	50	2	2		16	16						1			8	7	10	5	1	2							33	33		
Chesterfield Inlet.....	"	125	5	5		59	65									32	15	27	36	9	5							124	124		
Baker Lake.....	"	125	5	5		49	48									33	24	18	14	10	7							99	99		
Churchill Vocational.....	"	200	13	3		89	68						5	4		157	15	15	9	4	3							30	127		
Coral Harbour.....	"	75	3	3		18	28						2			26	23	17	16	10	2	1						12	34		
Eskimo Point.....	"	100	4	4		44	45						2			26	13	21	15	10	2							32	61		
Rankin Inlet.....	"	125	5	2		37	39						5	6		26	13	21	15	10	2							71	16		
Whale Cove.....	"	50	2	2		20	18						4	2		19	7	7	4	1	4		1					23	21		
Belcher Island.....	"	125	1	1		12	7									9	6	4										19	19		
Port Burwell.....	"	25	1	1		8	11						2			20	1											2	19	21	
TOTALS NWT.....		1800	82	68	1	11	718	718					58	66		157	568	273	236	169	79	44	9	6	3	1		358	1202	1560	
ARCTIC QUÉBEC																															
Fort Chimo.....	Fed.	175	7	6	1		51	59					9	6		24	25	30	18	16	3	5	4	2	1			2	126	128	
Port-Nouveau-Québec	"	50	2	2			16	24					3			26	14	3	1									44	44		
Poste-de-la-Baleine.....	"	200	9	7		2	86	57					15	3		69	51	18	15	12	9							183	183		
Iqviulik.....	"	25	1	1			11	14								6	1	9	6	3								25	25		
Kgatag.....	"	25	1	1			10	11								12	9	11	9	9	2							48	48		
Belin.....	"	70	3	2			23	22					3			8	9	10	7	1	6	1					1	79	80		
Inoukdjauac.....	"	70	3	3			25	48					4			49	10	6	16	6	2	1	1					132	132		
Povungituk.....	"	125	5	5			71	58					3			58	24	24	16	6	2							10	29	39	
Marcouit.....	"	50	2	2			23	16								13	18	6										62	62		
Sagoué.....	"	75	3	3			31	29					2			24	21			7	9	1									
TOTAL QUÉBEC.....		850	35	32	1	2	357	331					22	15		9	291	182	107	79	56	22	8	5	2	1		13	749	762	
TOTAL ARCTIC.....		2650	117	100	2	13	1075	1049					80	81		166	15	859	455	343	248	135	66	17	11	5	2		371	1951	2322

Summary of Business Turnover of Arctic Co-Operatives

		1960-61	1965-66 (estimated)
West Baffin (Cape Dorset)	Print making, carvings, handicrafts, retail store, fur trading.....	\$ 77,950	\$ 200,000
George River	Char fishery, handicrafts, retail store..	22,449	60,000
Kikitaoyak (Port Burwell)	Fishery, handicrafts, retail store, sealery, fur marketing.....	8,767	60,000
Coppermine	Carvings, handicrafts.....	3,000	20,000
Resolute Bay	Retail store, fur marketing, carvings, handicrafts.....	12,988	55,000
Grise Fiord	Retail store, carvings, fur marketing..		40,000
Holman	Print making, handicrafts.....		30,000
Fort Chimo	Fishery, handicrafts.....	27,139	60,000
Ekaloktitiak (Cambridge Bay)	Fishery.....	11,420	25,000
Great Whale River	Carvings, handicrafts.....		40,000
Ikaluit (Frobisher Bay)	Fishery, carvings.....	3,735	40,000
Povungnituk	Carvings, prints, retail store, fur marketing.....	59,944	250,000
Sisi (Frobisher Bay)	Housing, household supplies.....		2,000
Issatik (Whale Cove)	Retail store, fur marketing.....		125,000
Aklavik	Fur garments.....		50,000
Igloodik	Carvings, retail store.....		25,000
Innuik (Inuvik)	Housing.....		5,000
Great Bear (Fort Franklin)	Handicrafts.....		10,000
Payne Bay	Fishery, handicrafts, eider-down.....		20,000
Fort Resolution	Logging, wood products.....		75,000
		<u>\$227,392</u>	<u>\$1,192,000</u>

Indian Affairs Branch—Indian Population

Province	1954	1961	1962	1963	1964	1965*	Increase 1965	% Increase 1965
Prince Edward Island.....	272	348	363	374	376	394	18	4.8
Nova Scotia.....	3,002	3,746	3,834	3,935	3,994	4,102	108	2.7
New Brunswick.....	2,629	3,397	3,524	3,629	3,717	3,808	91	2.4
Québec.....	17,574	21,793	22,373	23,043	23,709	24,448	739	3.1
Ontario.....	37,255	44,942	46,172	47,260	48,465	49,458	993	2.0
Manitoba.....	19,684	25,681	26,676	27,778	28,833	29,957	1,124	3.9
Saskatchewan.....	18,750	25,334	26,483	27,672	28,914	29,996	1,082	3.7
Alberta.....	15,715	20,931	21,807	22,738	23,642	24,596	954	4.0
British Columbia.....	31,086	38,616	39,784	40,990	42,141	43,250	1,109	2.6
Yukon Territories.....	1,568	2,006	2,096	2,142	2,215	2,352	137	6.2
Northwest Territories.....	4,023	4,915	5,108	5,235	5,383	5,503	120	2.2
TOTAL.....	151,558	191,709	198,220	204,796	211,389	217,864	6,475	3.0

*Subject to Revision.

Indian Land in Reserves and Number of Bands, by Province

Province	No. of Bands	No. of Reserves	Total Area in Acres
Prince Edward Island	1	4	2,741.00
Nova Scotia	11	38	25,571.00
New Brunswick	15	23	37,654.86
Québec	35	39 (13)*	188,178.00
Ontario	112	170 (4)*	1,539,851.46
Manitoba	51	101	522,199.09
Saskatchewan	67	123	1,225,090.00
Alberta	41	96 (4)*	1,607,696.55
British Columbia	188	1,621	820,348.06
Yukon Territory	15	26 (26)*	4,844.00
Northwest Territories	15	29 (29)*	2,143.06
TOTAL	551	2,269 (76)*	5,976,317.08

*Indian Settlements included in the totals which are not classified as reserves.

Revolving Fund Loans

Outstanding advances April 1, 1965.....		\$ 714,319.60
Advances 1965-66		
British Columbia.....	\$45,141.68	
Alberta.....	91,098.41	
Saskatchewan.....	57,456.81	
Manitoba.....	51,612.22	
Ontario.....	64,314.65	
Quebec.....	4,397.37	
New Brunswick.....	20,171.00	
Nova Scotia.....	1,092.00	
Prince Edward Island.....	6,000.00	
		341,284.14
		<u>\$1,055,603.74</u>
Repayments 1965-66		
British Columbia.....	\$22,385.42	
Alberta.....	28,795.42	
Saskatchewan.....	55,631.05	
Manitoba.....	37,035.27	
Ontario.....	42,214.94	
Quebec.....	11,447.58	
New Brunswick.....	7,588.97	
Nova Scotia.....	6,090.42	
		\$ 211,189.07
Outstanding Advances, March 31, 1966.....		\$ 844,414.67
Interest credited to Government Revenue 1965-66.....		\$ 27,245.03
		<u><u>\$ 871,659.70</u></u>

Indian Band Funds

Statement of Receipts and Disbursements for year ended March 31, 1966

Band Fund—Capital

	Receipts	Disbursements
Agriculture.....	\$ 39,572.50	\$ 190,917.53
Operation of Band Property.....	34,026.92	897,791.80
Cash Payments and Entitlements		
Cash Distribution.....		1,353,872.18
Enfranchisements.....		116,958.34
Shares of transferred Indians.....	32,469.69	45,215.47
Reserve Management.....		77,947.44
Social Activities.....		50,419.28
Band Loans.....	42,030.75	124,728.93
Housing.....	159,838.31	1,339,674.46
Wells.....	3,658.94	68,117.93
Roads and Bridges.....	6,350.00	294,368.16
Land.....	165,018.53	65,916.90
Gravel Dues.....	162,035.90	
Lumber & Wood Sales.....	11,435.36	
Oil Royalties.....	1,307,168.14	
Oil Bonus.....	2,494,661.82	
Timber Dues.....	1,031,279.39	
Winter Works Labour Subsidy.....	98,555.38	
Miscellaneous.....	269,827.97	112,032.90
		<u>4,737,961.32</u>
Balance April 1, 1965.....	5,857,929.60	
Balance March 31, 1966.....	25,133,094.63	26,253,062.91
	<u>\$30,991,024.23</u>	<u>\$30,991,024.23</u>

Indian Band Funds
Statement of Receipts and Disbursements for year ended
March 31, 1966
Band Fund—Revenue

	Receipts	Disbursements
Agriculture.....	\$ 213,811.55	\$ 605,156.35
Operation of Band Property.....	24,572.16	399,098.09
Cash Payments and Entitlements		
Cash Distribution.....		559,865.94
Commutations.....		141.40
Enfranchisements.....		15,717.43
Pensions.....		21,391.50
Shares of Transferred Indians.....	5,841.47	7,786.73
Annuities.....		37,735.00
Education.....	18,633.25	40,120.23
Medical.....	10,064.42	52,354.11
Relief.....	21,293.51	428,100.42
Reserve Management.....		41,376.09
Transfer of Funds — Section 68.....		1,540,380.11
Salaries.....		290,495.12
Social Activities.....	84.50	72,800.83
Government Interest.....	1,454,327.19	
Housing.....	75,433.23	327,167.72
Wells.....	4,706.50	40,787.81
Roads and Bridges.....	61,739.20	230,833.66
Rentals, Oil.....	765,130.19	
Other Rentals.....	2,285,736.13	
Band Loans.....	7,307.45	132,033.84
Land.....	2,918.86	6,800.66
Winter Works Labour Subsidy.....	37,830.72	
Miscellaneous.....	496,376.27	153,219.86
	5,485,806.60	5,003,362.90
Balance April 1, 1965.....	3,401,269.35	
Balance March 31, 1966.....		3,883,713.05
	<u>\$ 8,887,075.95</u>	<u>\$ 8,887,075.95</u>

Indian Estate Accounts
Statement of Receipts and Disbursements for year ended
March 31, 1966

Balance April 1, 1965.....	\$318,010.53
Receipts.....	406,024.05
	<u>724,034.58</u>
Disbursements.....	292,855.91
Balance March 31, 1966.....	<u>\$431,178.67 (1)</u>

(1) Government Bonds held in Trust for various Estates total \$194,450.00 at March 31, 1966.

Indian Special Accounts
Statement of Receipts and Disbursements for the year ended
March 31, 1966

	Receipts	Disbursements
Fur Projects	\$ 52,434.77	\$ 50,031.24
Handicrafts.....	12,856.17 ⁽¹⁾	13,749.53
Cowessess Leafy Spurge.....	4,466.38	4,133.36
Absent of Missing Heirs.....	1,482.53	1,321.49
Suspense		
Rental.....	2,345,907.77	3,056,536.66
Miscellaneous.....		36,155.21
	<hr/> 2,417,147.62	<hr/> 3,161,927.49
Balance April 1, 1965.....	1,430,112.85	
Balance March 31, 1966.....		685,332.98
	<hr/> \$ 3,847,260.47	<hr/> \$ 3,847,260.47

(1) Bonds held in Trust for Indian Handicraft total \$6,000.00 at March 31, 1966.

Indian Savings Accounts
Statement of Receipts and Disbursements for year ended
March 31, 1966

Balance April 1, 1965.....	\$408,210.15
Receipts.....	80,443.44
	<hr/> 488,653.59
Disbursements.....	150,599.80
Balance March 31, 1966.....	<hr/> \$338,053.79 ⁽¹⁾

(1) Government Bonds held in Trust for various Indians total \$66,500.00 at March 31, 1966.

Fines—Indian Act
Statement of Receipts and Disbursements
March 31, 1966

Balance April 1, 1965.....	\$679,426.47
Receipts.....	73,325.56
	<hr/> 752,752.03
Disbursements.....	72,175.39
Balance March 31, 1966.....	<hr/> \$680,576.64

Indian Compensation Funds
Statement of Receipts and Disbursements for year ended
March 31, 1966

Balance April 1, 1965.....	\$ 94,128.14
Receipts.....	221,747.70
	<hr/> 315,875.84
Disbursements.....	187,503.17
Balance March 31, 1966.....	<hr/> \$128,372.67

Indian Education — Total Expenditures, 1965-1966

Province	Federal Schools				Provincial Schools				Total	
	Adminis- tration	Operating Costs	Repairs & Buildings & Equipment	Capital Costs	Payments for Tuition Fees & Supplies	Capital Payments Under Agreements	Transporta- tion of Indian Pupils	Maintenance of Indian Pupils		
	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Nova Scotia		231,611.95	22,704.44	116,723.82				100,510.72		471,550.93
New Brunswick		173,698.33	8,921.71	62,235.32			280.80	2,038.63	3,425.00	250,599.79
Prince Edward Island ..		15,437.71	1,465.90	814.83				71.00		17,789.44
Maritimes—Generally ..	9,204.83	7,351.58	70.34	297.75	173,414.58	83,410.75	59,450.04	67,664.43	3,778.31	404,642.61
Québec	18,678.98	1,034,735.13	140,862.67	500,002.59	904,157.25		166,807.57	1,042,496.00	64,761.67	3,872,501.86
Ontario	75,686.27	2,389,221.66	300,327.46	1,323,298.24	2,171,030.06	500,795.31	557,792.65	1,890,515.13	57,056.81	9,265,723.59
Manitoba	29,481.11	1,996,058.09	365,326.76	992,572.15	858,801.12	233,864.32	293,060.13	1,662,342.07	31,111.35	6,462,617.10
Saskatchewan	30,598.13	1,507,973.54	298,012.54	553,102.87	884,044.63	388,730.03	364,109.54	1,698,673.01	20,839.51	5,746,083.80
Alberta	31,054.27	1,398,862.17	228,115.64	688,712.64	1,484,399.35	607,734.21	517,813.19	1,752,993.58	34,672.41	6,744,357.46
British Columbia	78,576.00	1,737,988.55	418,743.49	391,283.59	1,669,362.08	606,595.53	403,624.65	2,215,798.01	26,726.94	7,548,698.84
Yukon	465.57	104,908.21	33,335.02	14,032.04	483.90		4,474.45	483,669.60		641,368.79
Headquarters & Misc. .	233,464.75	23,554.43		12,139.17	111.53			397.25	11,725.97	281,393.10
	507,209.91	10,621,401.35	1,817,885.97	4,655,215.01	8,145,804.50	2,421,130.15	2,367,413.02	10,917,169.43	254,097.97	41,707,327.31

**Number of Federal-Owned Indian Schools and Classrooms
by Province, January, 1966**

Province	Number of Schools	Number of Classrooms
Prince Edward Island	1	2
Nova Scotia	6	25
New Brunswick	8	24
Québec	28	131
Ontario	101	262
Manitoba	72	240
Saskatchewan	69	207
Alberta	31	165
British Columbia	74	214
Yukon	1	5
Total	391	1,275

Figures include 6 seasonal and 5 hospital schools.

Elementary and Secondary Indian Students attending Non-Federal Schools January, 1966

Province or Territory	Number of Schools	Distribution by Grades															Absent from Reserve	Total
		Pre-1	1	2	3	4	5	6	7	8	9	10	11	12	13	Spec.		
Prince Edward Island	4					1		1			4	1					30	37
Nova Scotia	24	28	38	30	30	35	25	26	26	41	54	21	13	1		1	50	419
New Brunswick	24		19	14	22	41	48	37	45	31	44	18	12	7			102	440
Québec	63	73	182	177	157	144	180	261	197	276	176	105	69	8		5	485	2,495
Ontario	260	128	442	457	453	445	454	434	453	398	637	392	208	137	31	64	2,000	7,133
Manitoba	102	17	359	265	311	268	276	208	198	112	163	96	61	32		15	449	2,830
Saskatchewan	142	26	561	414	352	292	267	274	258	157	216	111	61	66		59	737	3,851
Alberta	131	40	507	397	357	297	308	289	324	260	331	132	84	83		37	300	3,746
British Columbia	342	133	593	493	445	451	483	451	427	488	402	295	158	114	16	290	1,300	6,539
Northwest Territories	25	122	203	178	123	154	120	93	75	45	38	31	13	11		53		1,259
Yukon Territory	24		118	59	62	46	77	59	50	43	26	18	6	2		27	13	606
TOTAL	1,141	567	3,022	2,484	2,312	2,174	2,238	2,133	2,053	1,851	2,091	1,220	685	461	47	551	5,466	29,355

Indian School Enrolment, by Province

January, 1966

Province	Enrolment			Distribution by Grades													
	Boys	Girls	Total	Pre-1	1	2	3	4	5	6	7	8	9	10	11	12	Spec.
Prince Edward Island	29	20	49	8	13	7	1	7	2	5	5	1					
Nova Scotia	374	373	747	104	87	87	105	88	93	93	60	30					
New Brunswick	355	310	665	47	116	166	90	65	67	53	37	24					
Québec	1,684	1,692	3,376	536	647	484	486	473	380	145	94	12					119
Ontario	3,445	3,267	6,712	684	1,169	990	961	832	666	530	388	299	40	15	12		126
Manitoba	3,039	3,003	6,042	451	938	969	798	725	686	553	389	277	105	75	40	24	12
Saskatchewan	2,520	2,460	4,980	566	829	718	712	612	561	405	280	207	33	32	17		8
Alberta	1,981	1,931	3,912	378	634	522	475	362	393	375	245	206	126	33	23	14	126
British Columbia	2,797	2,657	5,454	303	1,007	811	678	694	629	485	416	233	79	48			71
Yukon	56	47	103	16	21	18	25	23									
TOTAL	16,280	15,760	32,040*	3,093	5,461	4,772	4,331	3,881	3,477	2,644	1,914	1,289	383	203	92	38	462

*Does not include 1,222 pupils who have not Indian status.

**Enrolment in Residential Schools and Hostels, Classified by Denomination and by Province or Territory
January, 1966**

Denominational Auspices	Residential Schools & Hostels								Enrolment			
	Nova Scotia	Québec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Yukon	Total	Boys	Girls	Total
Anglican Church		2	4	1	2	3	2	1	15	1,240	1,216	2,456
Presbyterian			1	1					2	143	146	289
Roman Catholic	1	4	4	7	7	9	9	1	42	3,072	3,079	6,151
United Church				3		2	1		6	445	417	862
Federally Operated Hostel								1	1	61	56	117
TOTAL	1	6	9	12	9	14	12	3	66**	4,961	4,914	9,875*

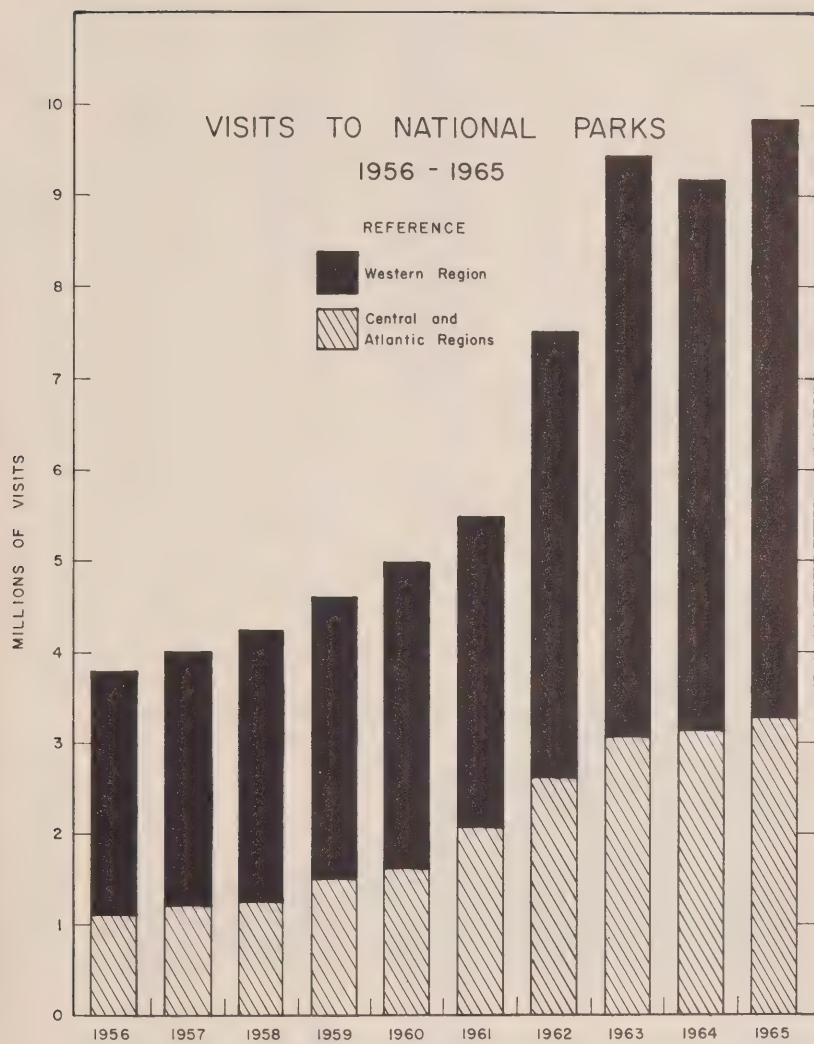
* Includes 3,158 boarders attending Non-Federal Schools.

**Includes 15 units providing hostel service but not classroom instruction.

Summary of Enrolment of Indian Pupils January, 1966

Classification of Pupils	Distribution by Grades														Absent from Reserve	Total
	Pre-1	1	2	3	4	5	6	7	8	9	10	11	12	13		
Federal Schools.....	3,093	5,461	4,772	4,331	3,881	3,477	2,644	1,914	1,289	383	203	92	38		462	32,040*
Non-Federal Schools.	567	3,022	2,484	2,312	2,174	2,238	2,133	2,053	1,851	2,091	1,220	685	461	47	551	29,355
Grand Total.....	3,660	8,483	7,256	6,643	6,055	5,715	4,777	3,967	3,140	2,474	1,423	777	499	47	1,013	61,395
Pupils without Indian status in Federal schools	130	198	170	170	165	119	114	72	56	12	10	1	1		4	1,222

*Does not include 1,222 pupils who do not have Indian status attending Federal schools.
Includes 1,627 Indian pupils who attend Federal schools in which language of instruction is French.



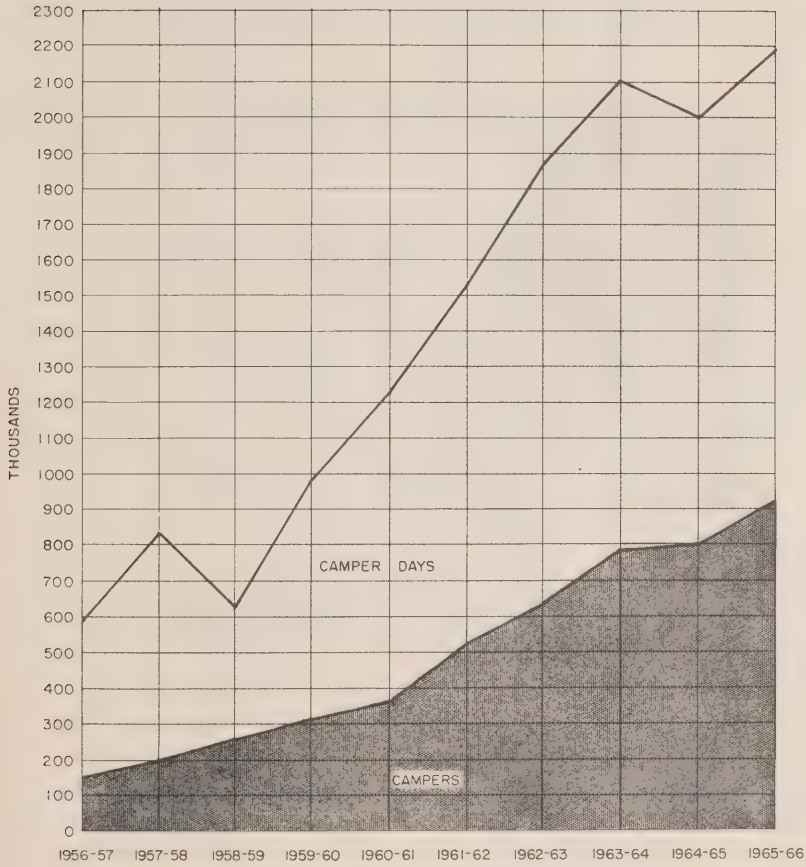
**Comparative Statement of Visitors to the
National Historic Parks and Major Historic Sites
for the period April 1 to March 31**

	1965-66	1964-65	Increase or Decrease	%
A. G. Bell Museum	110,158	106,228	+ 3,930	+ 3.69
Batoche Rectory	8,869	7,855	+ 1,014	+ 12.90
Fort Amherst	22,576	9,513	+ 13,063	+ 137.31
Fort Anne	66,534	64,551	+ 1,983	+ 3.07
Fort Battleford	42,878	38,825	+ 4,053	+ 10.43
Fort Beausejour	49,087	49,427	- 340	- .68
Fort Chambly	101,286	91,493	+ 9,793	+ 10.70
Fort Langley	111,941	116,723	- 4,782	- 4.09
Fort Lennox	26,191	20,423	+ 5,768	+ 28.24
Fortress of Louisbourg	148,072	113,148	+ 34,924	+ 30.86
Fort Malden	52,670	38,916	+ 13,754	+ 35.34
Fort Rodd Hill	36,614	32,922	+ 3,692	+ 11.21
Fort Wellington	40,917	52,167	- 11,250	- 21.56
Grand Pré	62,848	64,194	- 1,346	- 2.09
Halifax Citadel	213,878	213,212	+ 666	+ .31
Lower Fort Garry	92,208	86,620	+ 5,588	+ 6.06
Martello Tower	40,993	38,893	+ 2,100	+ 5.39
Palace Grand Theatre	5,525	—	+ 5,525	—
Port Royal Habitation	42,699	39,265	+ 3,434	+ 8.74
Prince of Wales Fort	311	424	- 113	- 26.65
SS Keno	6,857	—	+ 6,857	—
Signal Hill	275,209	241,242	+ 33,967	+ 14.08
Sir W. Laurier's Birthplace	7,562	7,190	+ 372	+ 5.17
Woodside	13,554	11,699	+ 1,855	+ 15.85
National Historic Sites Total	1,579,437	1,444,930	+ 134,507	+ 9.30
Summary of totals				
National Parks	9,845,283	9,179,028	+ 666,255	+ 7.25
National Historic Sites	1,579,437	1,444,930	+ 134,507	+ 9.30
	11,424,720	10,623,958	+ 800,762	+ 7.53

**Comparative Statement of Visitors to the National Parks
for the period April 1 to March 31**

National Parks	1965-66	1964-65	Increase or Decrease	%
Banff	1,803,490	1,605,784	+ 197,706	+ 12.31
Cape Breton Highlands	729,443	624,942	+ 104,501	+ 16.72
Elk Island	197,728	175,105	+ 22,623	+ 12.91
Fundy	679,406	566,443	+ 112,963	+ 19.94
Georgian Bay Islands	8,361	8,371	- 10	N/C
Glacier	767,206	705,150	+ 62,056	+ 8.80
Jasper	522,658	480,102	+ 42,556	+ 8.86
Kootenay	638,812	548,515	+ 90,297	+ 16.46
Mount Revelstoke	741,457	706,015	+ 35,442	+ 5.02
Point Pelee	697,328	661,166	+ 36,162	+ 5.46
Prince Albert	152,256	140,521	+ 11,735	+ 8.35
Prince Edward Island	967,372	1,112,536	- 145,164	- 13.04
Riding Mountain	687,959	681,313	+ 6,646	+ .97
St. Lawrence Islands	60,330	67,109	- 6,779	- 10.10
Terra Nova	108,738	66,180	+ 42,558	+ 64.30
Waterton Lakes	393,426	371,258	+ 22,168	+ 5.97
Yoho	689,313	658,518	+ 30,795	+ 4.67
TOTAL	9,845,283	9,179,028	+ 666,255	+ 7.25

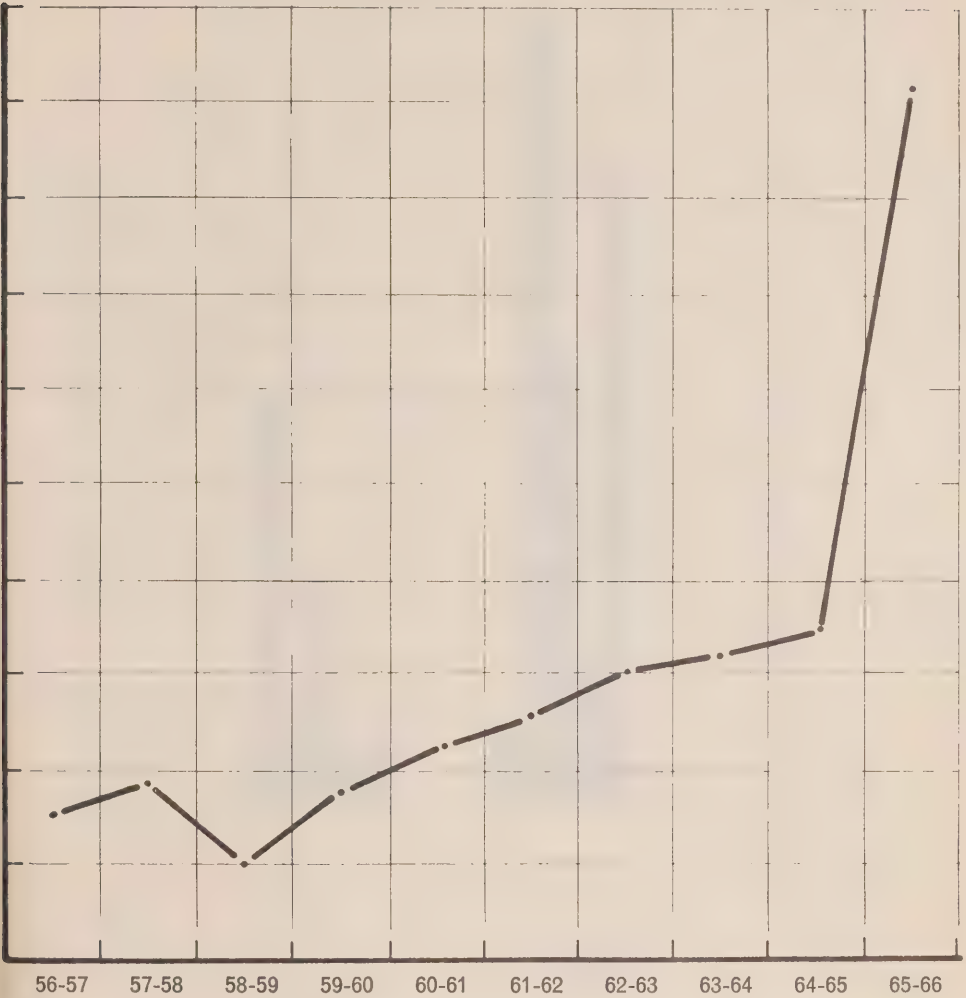
CAMPGROUND ATTENDANCE 1956-57 TO 1965-66



Comparative Statement of Campers and Camper Days for the 1964 and 1965 seasons

National Parks	1965 Campers	1964 Campers	Increase or Decrease		1965 Camper days	1964 Camper days	Increase or Decrease		%
Banff	322,728	273,296	+	49,432	492,005	442,673	+	49,332	+ 11.14
Cape Breton Highlands	57,875	49,322	+	8,553	123,597	99,707	+	23,890	+ 23.96
Elk Island	6,964	7,305	-	341	9,773	9,163	+	610	+ 6.65
Fundy	94,989	88,632	+	6,357	182,550	164,806	+	17,744	+ 10.76
Georgian Bay Islands	4,450	4,921	-	471	24,417	22,449	+	1,968	+ 8.76
Glacier	15,504	14,605	+	899	18,003	16,649	+	1,354	+ 8.13
Jasper	117,439	103,333	+	14,106	197,448	187,844	+	9,604	+ 5.11
Kootenay	48,232	40,457	+	7,775	79,190	71,272	+	7,918	+ 11.10
Mount Revelstoke	—	—	—	—	—	—	—	—	—
Point Pelee	19,155	20,534	-	1,379	70,014	67,765	+	2,249	+ 3.31
Prince Albert	27,304	25,423	+	1,881	250,247	247,734	+	2,513	+ 1.01
Prince Edward Island	43,119	49,056	-	5,937	165,092	158,509	+	6,583	+ 4.15
Riding Mountain	42,873	36,010	+	6,863	354,627	352,538	+	2,089	+ 0.59
St. Lawrence Islands	3,860	4,375	-	515	9,596	11,232	-	1,636	- 14.56
Terra Nova	12,730	7,526	+	5,204	49,478	30,379	+	19,099	+ 62.86
Waterton Lakes	63,017	31,132	+	31,885	102,642	55,711	+	46,931	+ 84.24
Yoho	43,927	43,253	+	674	60,327	61,690	-	1,363	- 2.20
TOTAL	924,166	799,180	+	124,986	2,189,006	2,000,121	+	188,885	+ 9.44

GROWTH OF THE DEPARTMENT OF
NORTHERN AFFAIRS & NATIONAL RESOURCES (1956 TO 1965)



The above figures represent authorized establishment as at March 31 of each fiscal year. On January 1, 1966, with the transfer of the Indian Affairs Branch, 2893 positions were added to the staff; on the same date, Water Resources Branch (277 positions) was transferred to the Department of Mines and Technical Surveys.

MAN YEARS OF TRAINING 1965-66

EXTERNAL TRAINING

FRENCH LANGUAGE PROGRAM
 ENGLISH LANGUAGE PROGRAM
 CSC COURSES
 EDUCATIONAL LEAVE
 MISCELLANEOUS

6.00
 1.50
 4.30
 7.50
 0.75

INTERNAL TRAINING

JEO/JO PROGRAM
 DEPARTMENTAL COURSES
 NORTH. ADMIN. BRANCH PROGRAMS
 NAT. & HIST. RESOURCES BRANCH PROGRAMS
 WATER RESOURCES BRANCH PROGRAMS

0.70
 0.30
 2.20
 0.60
 3.90

1 2 3 4 5 6 7 8
 MAN YEARS

SUMMARY:

EXTERNAL - 20.05 MAN YEARS
 INTERNAL - 7.70 MAN YEARS
 TOTAL 27.75 MAN YEARS

Summary of Revenues and Expenditures, 1965-1966

	Revenues	Expenditures
ADMINISTRATION SERVICES.....	\$ 4,445.17	\$ 1,435,559.41
NORTHERN CO-ORDINATION AND RESEARCH CENTRE.....	490.00	433,977.78
NATURAL AND HISTORIC RESOURCES BRANCH		
Branch Administration.....		528,216.78
National Parks and Historic Sites.....	3,006,963.97	26,363,290.53
Grant to Jack Miner Migratory Bird Foundation.....		10,000.00
Grant in aid of the development of the International Peace Garden in Manitoba...		15,000.00
National Battlefields Commission.....		275,000.00
Canadian Wildlife Service.....	4,786.53	1,791,105.71
	3,011,750.50	28,982,613.02
NORTHERN ADMINISTRATION BRANCH		
Branch Administration.....	4,001.75	1,514,201.25
Education.....	331,899.93	10,225,585.71
Welfare and Industrial.....	506,079.38	4,637,304.16
Yukon Territory.....	813,024.99	8,049,347.05
Northwest Territories.....	9,839,217.57	19,433,982.56
	11,494,223.62	43,860,420.73
INDIAN AFFAIRS BRANCH		
Branch Administration.....	3,365.68	1,598,131.22
Indian Agencies.....	287,462.26	7,604,110.56
Social Programs.....	86,798.03	24,791,132.19
Economic Development & Community Employment.....	370,700.93	5,318,689.30
Education.....	650,662.78	41,707,327.31
Grant to Provide Additional Services to Indians of British Columbia.....		100,000.00
Indian Annuities.....		562,138.00
	1,398,989.68	81,681,528.58
OTHERS.....	946.48	40,425.38
TOTALS FOR DEPARTMENT.....	\$ 15,910,845.45	\$156,434,524.90

DIRECTORY TO ADDITIONAL INFORMATION

- General Information.....Information Services Division,
Department of Northern Affairs and National Resources,
400 Laurier W., Ottawa
- Monthly oil and gas report.....Resource and Economic Development Group,
Department of Northern Affairs and National Resources,
400 Laurier W., Ottawa
- *north (a bi-monthly magazine)...The Editor, north,
Northern Administration Branch,
Department of Northern Affairs and National Resources,
400 Laurier W., Ottawa
- National Parks.....Natural and Historic Resources Branch,
Department of Northern Affairs and National Resources,
400 Laurier W., Ottawa
- Canadian Wildlife.....Canadian Wildlife Service,
Department of Northern Affairs and National Resources,
400 Laurier W., Ottawa
- Indian Affairs.....The Secretariat,
Indian Affairs Branch,
Department of Northern Affairs and National Resources,
400 Laurier W., Ottawa

*Available from the Queen's Printer, Ottawa.

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Department of INDIAN AFFAIRS
NORTHERN DEVELOPMENT

Annual Report

FISCAL YEAR

1966-1967





Annual Report

Fiscal Year 1966-67

Department of INDIAN AFFAIRS
and NORTHERN DEVELOPMENT

Issued under the authority of
HONOURABLE ARTHUR LAING, P.C., M.P., B.S.A.,
Minister of Indian Affairs and Northern Development

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ROGER DUHAMEL, F.R.S.C.
QUEEN'S PRINTER AND CONTROLLER OF STATIONERY
OTTAWA, 1967

Cat. No.: R1-1967

*The Honourable Arthur Laing, P.C., M.P., B.S.A.,
Minister of Indian Affairs and
Northern Development.*

SIR:

I have the honour to submit the First Annual Report of the newly constituted Department of Indian Affairs and Northern Development. Although this is the first report of the Department under this name, it takes its place in a long and historic series of reports covering the activities of predecessor Departments of the Canadian Government.

I am advised that the first report on the administration of Indian Affairs dates back to the latter part of the Eighteenth Century when Sir William Johnson was Superintendent of Indian Affairs. With the Indian Affairs Branch once again joined to the Department, many of the historic functions of the Department of the Interior are again a single responsibility. As you know, that Department administered much of the responsibilities which are now yours, from 1873 to 1936.

The Department of the Interior was headed at different times by such well known Canadians as Joseph Howe, Sir John A. Macdonald, Sir Clifford Sifton, Arthur Meighen, R. B. Bennett and from your own native city of Vancouver, Ian McKenzie.

The Department as presently constituted has major trust responsibilities to discharge on behalf of the indigenous peoples of Canada, the people and resources of the North and our heritage in National Parks, Wildlife and Historic sites.

The responsibilities of the Department are wide-ranging. They begin at the individual level and encompass those of municipal, territorial, quasi-provincial and para-international nature. The evolution of self-supporting co-operatives of individuals, semi-autonomous and fully autonomous municipalities, the devolution of more self-government, the close relationship with the provinces and provincial programs and co-operation with other countries (exemplified by the work done under the Migratory Bird Convention) all give a further dimension to the scope of the activities of the Department. In fact, we must supply expertise on problems ranging from anthropology to zoology and on many non-scientific questions of the inter-relationship of many diverse people.

This report reflects the steady progress of the Department and the achievements of the past year. It is a portrayal of the united efforts of the people who make up the departmental staff and the Indian and Eskimo people.

It is especially appropriate in Canada's centennial year that the role of the historic sites is acknowledged. Our history is part of our present and a powerful influence on the future. The commemoration of past events is an important matter which the Department is proud to discharge. The Department's role is also making available to all Canadians, and their visitors, the best examples of natural environment and in preserving the forms of Canada's pioneering past deserve to be noted.

The activities of the Department of Health and Welfare and other government agencies, together with the advanced programs of housing and services provided by this Department are having their effect upon the health and longevity of the indigenous peoples. Death rates are falling rapidly and life expectation grows. Apart from the hazards of accident to which all frontier people are subject, mortality among Indians is now at levels which are comparable to those experienced in Canada as a whole. The infant mortality rate per thousand live births fell to 47 per thousand in 1965, in marked contrast to the 1960 rate of 82 per thousand. This is reflected in the latest calculations of the life expectancy at birth for Indian children which is now up to 63 years. Apart from accidents during adolescence and the early years of adult life, Indian people now have life expectancies equal to or longer than the Canadian population in general.

Similar gratifying statistics apply to the Northern Territories where infant mortality per thousand live births dropped from 210 in 1960 to a figure which is below 100 in the last year in which statistics are available, 1966.

These achievements are a remarkable contrast to the unhappy statistics of past years, but yet much remains to be done. I expect that this favourable trend in infant mortality rates will continue to improve almost as greatly in the next few years.

Both the Indian and Eskimo people are finding more opportunities to use their skills productively and are taking their place in the work force of Canada. The educational processes are enabling more of them to take gainful employment and find satisfaction in wage earning. There are now over 4,000 young Indian men and women taking technical and High School educational training. In the near future, these young people will provide the community leadership without which government programs cannot succeed.

I would be remiss if I did not draw your attention to the progress made in the internal management of the Department. Based upon measures instituted in the period following the report of the Royal Commission on Government Organization (the so-called "Glassco Report"), the Department is now beginning to operate an internal management system which is proving its effectiveness. The program of personnel evaluation, program analysis and review and budget control are beginning to prove their worth. In the next few years they will demonstrate their effectiveness on a larger scale. The efforts which have been expended on establishing the management systems

will return a rich reward in the future efficiency and improved utilization of staff skills.

I think it is a tribute to the work of the staff to note that the Department is as advanced along the road of administrative reform in federal departments as any other agency of government.

The Annual Report provides the outlines of the progress made by the various parts to the Department. It is encouraging. It provides a basis for the next steps in the long and historic development of Indian people, of the Yukon and Northwest Territories, and of our service to those visiting the National and Historic Parks and enjoying Canadian Wildlife.

Respectfully submitted,

E. A. Côté,
Deputy Minister.

MINISTER

DEPUTY MINISTER
(ALSO CHAIRMAN N.P.C.)

PARLIAMENTARY SECRETARY

EXECUTIVE ASSISTANT
SPECIAL ASSISTANT
SPECIAL ASSISTANT

ADVISORY COMMITTEE ON NORTHERN DEVELOPMENT
NORTHERN CO-ORDINATION AND RESEARCH CENTRE

ASSISTANT DEPUTY MINISTER (NORTHERN DEVELOPMENT)

LEGAL ADVISER
PUBLIC INFORMATION ADVISER

FINANCIAL & MANAGEMENT ADVISER
DEPUTY FINANCIAL & MANAGEMENT ADVISER

MANAGEMENT SERVICES
MATERIEL AND SUPPLY
PROGRAM ANALYSIS AND MANAGEMENT ACCOUNTING
MANPOWER BUDGETING
COMPUTER INFORMATION SYSTEMS

PROGRAM MANAGEMENT EVALUATION

EXECUTIVE ASSISTANT TO THE DEPUTY MINISTER
ADMINISTRATION
DEPARTMENTAL LIBRARY

PERSONNEL ADVISER
DEPUTY PERSONNEL ADVISER

DEVELOPMENT AND TRAINING
EMPLOYEE RELATIONS
CLASSIFICATION & PAY ADMINISTRATION
MANPOWER UTILIZATION
PERSONNEL ADMINISTRATION

SENIOR ASSISTANT DEPUTY MINISTER

INDIAN AFFAIRS BRANCH

FINANCIAL AND MANAGEMENT SERVICES
FEDERAL - PROVINCIAL RELATIONS
PERSONNEL ADMINISTRATION
POLICY AND PLANNING DIRECTORATE
ADMINISTRATION DIRECTORATE
SECRETARIAT
INFORMATION DIVISION
LANDS - MEMBERSHIP AND ESTATES DIVISION
SUPPORTING SERVICES DIVISION
DEVELOPMENT DIRECTORATE
SOCIAL PROGRAMS DIVISION
RESOURCES AND INDUSTRIAL DIVISION
ENGINEERING & CONSTRUCTION DIVISION
EDUCATION DIRECTORATE
ADMINISTRATION AND RESIDENTIAL SCHOOL DIVISION

RESOURCE AND ECONOMIC DEVELOPMENT GROUP
ECONOMIC STAFF GROUP
RESOURCE MANAGEMENT DIVISION
ADMINISTRATIVE SERVICES

CANADIAN WILDLIFE SERVICE
REGIONAL SUPERINTENDENTS
WESTERN REGION
EASTERN REGION

NATIONAL AND HISTORIC PARKS BRANCH
ENGINEERING & ARCHITECTURAL DIVISION
FINANCIAL & MANAGEMENT ADVISORY DIVISION
PERSONNEL ADMINISTRATION
NATIONAL PARKS SERVICE - OPERATIONS
NATIONAL PARKS SERVICE - PLANNING
NATIONAL HISTORIC SITES
NATIONAL HISTORIC SITES SERVICE OPERATION

NORTHERN ADMINISTRATION BRANCH
FINANCIAL AND MANAGEMENT ADVISORY DIVISION
PERSONNEL ADMINISTRATION
EDUCATION DIVISION
ENGINEERING DIVISION
INDUSTRIAL DIVISION
TERRITORIAL DIVISION
WELFARE DIVISION

*** THIS DEPARTMENTAL ORGANIZATION CHART DOES NOT REFLECT THE ORGANIZATIONAL CHARACTERISTICS AND RELATIONS WITH THE DEPARTMENT OF THE DEPUTY MINISTER FOR THE NORTHWEST TERRITORIES GOVERNMENT**
-NORTHWEST TERRITORIES GOVERNMENT
-NATIONAL BATTLEFIELDS COMMISSION
-HISTORIC SITES AND MONUMENTS BOARD
-NORTHERN CANADA POWER COMMISSION
-NORTHERN TRANSPORTATION COMPANY LIMITED

NORTHERN ADMINISTRATION BRANCH
FINANCIAL AND MANAGEMENT ADVISORY DIVISION
PERSONNEL ADMINISTRATION
EDUCATION DIVISION
ENGINEERING DIVISION
INDUSTRIAL DIVISION
TERRITORIAL DIVISION
WELFARE DIVISION

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THE NORTH



Eskimo artist working on ceramics.

(Photo: Fred Brummer.)

Northern Administration

The Northern Administration Branch discharges Departmental responsibilities in the Northern Territories and maintains a field staff in many northern settlements. The Branch is made up of the Directorate, six divisions, a Personnel Adviser and a Financial and Management Adviser.

An increase in Branch activities is reflected in the amounts provided in the Departmental estimates. Among the significant developments were construction of an additional twenty-seven school classrooms, the opening of the first kindergarten, increased school enrolment, the establishment of four Eskimo Co-operatives and one credit union, the growing popular interest in Eskimo sculpture, further progress in Eskimo housing, the further extension of the northern highway system and the many planning studies which were undertaken.

The tour of the north by the members of the House of Commons Standing Committee on Northern Affairs (and National Resources) was a significant development in the year, as was the publication of the report of The Advisory Commission on the Development of Government in the Northwest Territories.

An announcement of particular interest and historic significance concerned the establishment of Yellowknife as the seat of Territorial government, after years in which the Territories have been administered from Ottawa. The move to Yellowknife is the first step in a phased transfer of administration of programs and services from federal to territorial auspices.

Territorial Matters

Task Force

A task force of experienced officers was formed to plan the steps required to carry out major recommendations of The Advisory Commission on the Development of Government in the Northwest Territories. The Commission, appointed in June 1965, presented its report in August 1966.

Pending the transfer of responsibilities, the Territorial Division of the Branch continues to administer ordinances and regulations concerning education, health, welfare, municipal affairs, liquor, game, workmen's compensation and mining safety on behalf of the Council of the Northwest Territories.

Officers of the Branch act in an advisory capacity to the Commissioners of the Yukon and Northwest Territories, pursuant to instructions issued from time to time by the Minister. The Council of the Northwest Territories met in both Ottawa and Resolute Bay, while the Yukon Council held its meetings in

Whitehorse. Prior to each Session of the Councils, draft legislation and sessional papers are prepared for their consideration.

Payments to Territorial Governments

In 1962, Parliament voted \$7,359,103 for capital expenditures in the Yukon, over the five-year period from April 1, 1962 to March 31, 1967. Advances from this fund were made to the Government of the Yukon Territory during the year to cover the Territory's capital requirements for loans to a total of \$929,151. This represented the balance of the fund authorized by Parliament for the five-year period. In addition to this, the annual operating grant, which for this year came to \$1,814,311 was made to the Yukon Territorial Government. This sum covers the operation and maintenance of such activities as education, welfare, and the area development programs. Capital requirements of the Government of the Northwest Territories during the five-year period 1962-67 were met with loan funds of \$7,648,000. Advances from these funds to the Northwest Territories during the year came to \$2.7 million to cover capital requirements in the year. The operating grants to the Northwest Territories this year amounted to \$2,666,205.

The financial arrangements referred to here were the result of a report made in 1962 by an Interdepartmental Committee on Federal-Territorial Financial Relations, under the Chairmanship of the Director of the Northern Administration Branch. This Committee has been reconstituted under the same chairman with representatives of the Department of Finance, the Treasury Board, from this department, and the Treasurer of the Yukon and the Deputy Commissioner of the Northwest Territories. During the year 1966-67, the Committee was actively engaged in reviewing the financial relations and the allocation of functions between the Federal and Territorial Governments with a view to recommending terms of an agreement to be entered into by them when the present financial agreement expires on March 31, 1967. Recommendations have been submitted in respect to both Territories. It is expected that a new agreement will be implemented during the next fiscal year, with financial agreements to cover a two-year period.

Lands and Forests

LANDS

NORTHWEST TERRITORIES

In the Northwest Territories, centres of activity for land transactions were Inuvik, Yellowknife and Hay River. Subdivision surveys were carried

out at Inuvik, Yellowknife, Spence Bay, Wrigley, Gjoa Haven, Igloolik, Broughton Island, and Hall Beach, in addition to a number of public campgrounds and numerous individual parcels. At Pine Point, the resurvey of the commercial area has enabled construction of the hotel and shopping centre to proceed. The demand for residential lots has hastened the installation of water and sewer services in the easterly half of the townsite, so that additional lots can be made available.

Following the announcement of the selection of Yellowknife as the capital of the Northwest Territories, a freeze was placed on all vacant Crown land within the municipality, to ensure proper land use and to prevent speculation.

The Department of Agriculture has completed the survey of the Slave River grasslands but their report has not yet been received.

Revenue received from the disposal of Crown lands in the Northwest Territories amounted to \$94,393.15. Of this, \$54,370 was derived from the sale of lands under the administration and control of the Commissioner of the Northwest Territories and the proceeds were credited directly to the Northwest Territories Revenue Account.

YUKON TERRITORY

The disposal of land in the Yukon has been stimulated by mining developments in the Dawson, Ross River and Whitehorse areas. Construction of the townsite at Clinton Creek, northwest of Dawson, has started. At Ross River a sizeable subdivision has been surveyed and is becoming occupied. Purchases of housing sites in Whitehorse to serve New Imperial Mines staff have considerably reduced the number of vacant lots in Riverdale. After several years of negotiations, lots in the remainder of lot 19 at Whitehorse have been made available for sale, and it is expected that these will be quickly sold.

Surveys made during the year included a number of new public campgrounds, fire tower sites and subdivisions at Ross River, Destruction Bay and Whitehorse.

The total revenue received from the disposal of Crown lands in the Yukon amounted to \$147,026.17. Of this \$95,650.83 was derived from the sale of lands under the administration and control of the Commissioner of the Yukon Territory and the proceeds were credited directly to the Yukon Territory Revenue Account.

The following land transactions were completed during the year:

	Northwest Territories	Yukon Territory	Total
New leases, licences, etc., issued	91	113	204
New agreements for sale issued	74	98	172
Assignments registered	39	32	71
Land sales completed	112	89	201
Parcels of land purchased or otherwise vested in Crown	83	27	110
	<u>399</u>	<u>359</u>	<u>758</u>
Total number of leases, licences, etc., in force	430	497	927
Total number of agreements for sale in force	215	197	412
	<u>645</u>	<u>694</u>	<u>1,339</u>

A breakdown of the leases now in force indicates the following land uses:

	Northwest Territories	Yukon Territory	Total
Agricultural	10	8	18
Commercial	225	124	349
Educational	1	—	1
Gardening	14	—	14
Grazing	—	52	52
Quarrying	8	5	13
Recreational	7	6	13
Religious	32	20	52
Residential	133	264	397
Residential and Agricultural	—	11	11
Water Transmission	—	1	1
Licences	—	6	6
	<u>430</u>	<u>497</u>	<u>927</u>

FORESTS

Northern forests are being used to an increasing extent for recreational and industrial purposes with more emphasis now being placed on their utilization and management. Their value as a wildlife habitat and for watershed control has added to the urgency for a fuller management program.

YUKON TERRITORY

The 1966 forest fire season in the Yukon was the worst on record when 103 fires burned an area of 393,000 acres. The heaviest hit areas were

in the northwestern Yukon, near Dawson City, and across the central Yukon where hot, dry weather and severe lightning storms continued most of the summer.

Timber production figures for the Yukon are:

Lumber	5,213,882 f.b.m.
Fuel wood	8,411 cords
Round timber	1,626,296 linear feet

Forty-one campsites and picnic areas are at present operated and maintained by the Yukon Forest Service. These are located within the Yukon Territory and are along the Alaska Highway, the Whitehorse-Mayo Highway, the Dawson Highway, the Haines Road and the Watson Lake-Ross River Road.

NORTHWEST TERRITORIES

In the Northwest Territories, the 1966 forest fire season was the worst ever recorded by the Mackenzie Forest Service; a total of 248 known fires in the Mackenzie District and Wood Buffalo National Park burned an area of 540,941 acres. Hot, dry weather accompanied by high winds and many electrical storms accounted for most of these fires. The Mackenzie Forest Service is in charge of fire control in the Northwest Territories and Wood Buffalo National Park.

Timber production figures in the Mackenzie District are:

Lumber	3,501,600 f.b.m.
Fuel wood	8,295 cords
Round timber	427,130 linear feet

Sixteen campsites and picnic areas have been developed and are maintained by the Mackenzie Forest Service along the Northwest Territories Highway System, which extends southeast and northeast of Great Slave Lake.

Forest Insect and Disease Surveys

As in former years, forest insect and disease surveys are to be carried out in the Yukon and the Mackenzie District. The Federal Department of Forestry and Rural Development now has an entomologist stationed in Whitehorse who will conduct these surveys. Formerly this work was carried out by two entomologists sent out for six weeks, one to the Yukon and the other to the Mackenzie District from the Forest Entomology and Pathology Laboratory in Calgary.

Territorial Parks

Two territorial parks have been planned for the Yukon Territory and two for the Mackenzie. A feasibility study in this connection is to be carried out in August 1967.

A tourist booth is to be maintained on the Northwest Territories-Alberta border during the coming summer.

Tourism, Arts and Crafts, Co-operative Development

When the department was reorganized in 1966, responsibility for administration of Indian Affairs in the Northern Territories fell upon the Northern Administration Branch. This has added additional importance to the already pressing need for the development of employment and cash income opportunities in the north.

One promising opportunity which is yielding results is the fishing industry. New markets for Arctic fish foods have been opened up and as a result new cash incomes have been established. During the 1966 season, 10,000 pounds of seal, 38,000 pounds of trout and char and 250 whales were harvested in the Keewatin Region. The choice parts of the whale were shipped to Berthierville, Quebec for canning and 38,000 cans of Canada-approved whale products for sale outside the north were packed. An additional 52,000 cans of assorted fish products were prepared and shipped to southern markets.

After four years of experimental development, production will begin in 1967 of a range of market tested and approved specialty food products from the Arctic. Attractive packaging will help to make the product interesting to shoppers.

Tourism

During the year 1966-67, the Tourist Development and Promotion Section continued its efforts to make the Northwest Territories better known as a vacationland and to encourage the development of the local tourist industry.

The department undertook a survey and the results indicate that, in 1966, six thousand tourists spent two million dollars in the Northwest Territories, compared with an estimated one-and-a-half million dollars the previous year.

There were six hotels and four motels offering accommodation. Three new sports fishing lodges opened in 1966, bringing the total to 19. Sports hunting in the Mackenzie Mountains, opened in 1965, has become established as one of the main aspects of the tourist industry. The outfitters report a successful season with good hunting during 1966. Six outfitters are now licenced.

In 1966 an experimental tourist camp was set up at Rankin Inlet under the auspices of the department, providing minimum facilities for twenty people. Three new experimental camps will be set up in 1967, at Baker Lake, Eskimo Point, and Whale Cove. By establishing these four camps, the department hopes to pave the way for the development of tourism in this part of the Eastern Arctic.

Tourist publicity was directed primarily at the Canadian and United States markets. Additional prints of the films "Seal Hunt" and "Paydirt Angling" were purchased to increase distribution in the United States and

provide widespread distribution in Canada both by television and by group viewing. Tourist literature has been revised and reprinted. Literature was mailed out in response to 7,000 enquiries and was used in special promotions to stimulate interest in the Northwest Territories.

Special emphasis was placed on writers' tours in 1966 and seven were sponsored. The resulting publicity has been excellent.

Northwest Territories Tourist Statistics

"Tourist Camp" does not include outfitters, hotels and motels.

"Number of Visitors" includes only persons travelling for pleasure during months June to September inclusive.

"Visitor Expenditure" includes all spending by pleasure travellers while in the N.W.T.

Season	Tourist Camps	No. of Visitors	Visitor Expenditure
1960.....	8	1,000	\$450,000
1961.....	10	1,300	\$600,000
1962.....	14	2,200	\$850,000
1963.....	10	3,500	\$1,000,000
1964.....	14	5,000	\$1,300,000
1965.....	16	6,000	\$1,500,000
1966.....	19	6,000	\$2,100,000
*			

* First year of detailed visitor survey indicates previous years' estimates may have been high for number of visitors and low for visitor expenditure.

Co-operative Development

The co-operative development program which was started in 1959 continued to expand and increase. Co-operatives have proved to be valuable tools for the people in the Canadian north.

Through participation in co-operative activities, members of Arctic co-operatives now have many more opportunities to manage their own affairs and business matters. They have the opportunity to participate in decision-making, such as organizing production, setting prices, and playing a more active and positive role in all aspects of their community.

Arctic co-operatives have taken over and re-organized such activities as the production and selling of carvings and handicrafts. They have also started activities in which the people have not had any previous experience. The operation of fisheries, retail stores, bakeries, print shops, provision of housing, contracting for services, etc., are examples of such activities. Some of the co-operatives have become important economic influences and their effect is felt well beyond the boundaries of their settlements.

In 1966, a group at Gjoa Haven, working in handicrafts, commercial fishing and sealing, as well as operating a laundry and a bakery, was incorporated as the Kekertak Co-operative Association. At Pelly Bay, 150

Co-operatives and Credit Unions N.W.T. and N. Quebec

Incorporated In	Mackenzie District		Arctic District		Northern Quebec		Total Co-ops	Credit Unions
	Co-ops	Credit Unions	Co-ops	Credit Unions	Co-ops	Credit Unions		
1959.....	—	—	1	—	1	—	2	—
1960.....	1	—	2	—	1	—	4	—
1961.....	2	—	2	—	2	—	6	—
1962.....	—	—	2	—	—	1	2	1
1963.....	3	1	1	—	1	—	5	1
1964.....	—	—	—	—	1	—	1	—
1965.....	1	—	—	—	—	—	1	—
1966.....	4	1	—	—	—	—	4	1
TOTAL.....	11	2	8	—	6	1	25	3

miles to the east, another group, also originally sponsored by the local mission, became an independent organization under the name of Koomiut Co-operative Association. It is anticipated that the fisherman's co-operative formed at Hay River will have a far-reaching effect on commercial fishing activities in the Great Slave Lake area.

There are now eleven co-operatives in the Mackenzie District and eight in the Arctic District. Departmental co-operative development staff provides technical assistance and supervision to these and to four of the six co-operatives in Northern Quebec. In a number of settlements there are groups in formative stages of development which may lead to the establishment of new co-operatives in the future. When the first Arctic co-operatives were started, their structure was completely unknown to most northern people. Now they are located over the Canadian north from Port Burwell in the east to Aklavik in the west. It is particularly significant that, in a number of settlements, local people themselves have taken the initial steps toward the establishment of co-operative enterprises.

The Northwest Territories Government has been an active participant in co-operative development since 1964. Through contracts with the Co-operative Union of Canada which, on its part, has allocated some of the funds of their program for work in the north, the Government of the Northwest Territories provides technical and financial assistance to some development programs in the Mackenzie District. It has also provided working capital loans. At Fort Resolution the co-operative and community development program was started by the Co-operative Union of Canada as a pilot project and, as such, has provided valuable experience for approaching similar projects in the future. It is significant that many of the recent requests for assistance in co-operative development in the Mackenzie District have come from Indian communities.

When the first northern co-operatives were started, working capital was provided in the form of loans. While loans are still made, co-operatives are building up their reserves and capital so effectively that in 1965 funds borrowed from the Eskimo Loan Fund represented only 32 per cent of the million dollars used for working capital by the 17 co-operatives reporting.

Much of the merchandise sold by co-operatives is produced by members, including such items as carvings, crafts, fur, fish, etc. A sizable sum is returned to the members in payment. In addition to the returns for produce sold in 1964-65, co-operatives paid out \$138,669 in wages and salaries; an important contribution to the economy of the settlements. Total membership of the seventeen co-operatives was 1,072.

Gross sales of co-operatives in the north have grown many times over. The following table demonstrates this fact:

Year	No. of Co-ops Reporting	Gross sales
1961	2	\$ 204,000
1964	15	984,000
1965	17	1,175,000
Sales in 1966 were estimated to be \$1,500,000		

Welfare Services

GENERAL

The Northern Welfare Service provides social welfare assistance to all persons including Indian people in the Northwest Territories and to Eskimos in Arctic Quebec. It has continued to operate on the basis of providing assistance which strengthens the position of individuals and families who are experiencing social or financial problems. It is naturally concerned and active in seeking to mitigate the special problems which affect northern communities.

The field staff operate under the direction of two District Welfare Superintendents with professional social workers located at six regional centres and five other communities. Teachers, administrators and other officers of the department carry out the programs in the smaller centres.

The basic federal programs of Family Allowances, Old Age Security, Old Age Assistance, Blind Persons Allowances and Disabled Persons Allowance apply in the north just as they do in the rest of Canada. The Social Assistance Program is intended to provide additional assistance where it is required. The Child Welfare Program provides care for children who are in need of protection and for others whose parents are temporarily unable to care for them. Adoption services are provided, as is care for unmarried mothers.

The service provides a comprehensive special care program for those who are incapacitated and for those who need to be cared for outside their own homes while undergoing medical treatment. The elderly and the disabled are cared for in boarding homes and are given institutional care when needed.

When the Government of the Northwest Territories has completed its planned program of constructing hostels for the elderly, the federal government will purchase care in these hostels for elderly Indians and Eskimos.

Rehabilitation services for the disabled are purchased from specialized agencies in the provinces.

Medical Social Services alleviate the special problems of hospital patients, especially those of Eskimos in hospital in the south. Eskimo patients are assisted to keep in touch with their families through the use of tape recorded messages and progress reports. The department assists patients leaving hospital with residual disabilities and is responsible for repatriation of

all patients from hospitals in the south. During the year, 1,262 Eskimo patients were returned to their homes, chiefly by air. Many stayed at the transit centres while they were waiting for transportation to their homes. These centres are operated by the government at Frobisher Bay, Churchill, Hall Beach, Cambridge Bay and Inuvik.

COMMUNITY WELFARE CENTRES

The Community Welfare Services provide assistance to communities and groups within communities to deal with social problems of many kinds. The Community Development Fund enabled a number of northern communities to undertake many useful projects to be originated and carried out under local responsibility. One hundred and fifty thousand dollars was allocated to the Arctic District, and \$40,000 to the Mackenzie District. With these funds, communities undertook various physical improvement projects to provide necessary facilities.

During the year, delegates from six communities in the Keewatin District met in Churchill as a Regional Eskimo Council. The Regional Council was the first of its kind, and enabled representatives from local community councils to exchange ideas and to increase their experience with the principles and practices of local government, as well as informing government officers of the main trends in Eskimo opinion. Reports on the conference are being circulated widely throughout the north, and in the coming year the department plans to sponsor Regional Councils in several other Regions. In this way, the ground work is being laid for future inter-regional meetings.

Two experimental projects to provide training in community development principles and practices for Branch officers were undertaken during the year. These projects were conducted in Ottawa. This program will train staff and Eskimo leaders in northern settlements in 1967-68. Other experimental training projects included seminars, supplemented by films and guest speakers, on problems of cultural change for young Eskimos being trained for school classroom assistants.

Activities aimed at developing and sustaining various forms of cultural expression native to the north were continued during the year. Several exhibitions of Eskimo art were arranged in the United States and Canada, and more are planned for the coming year. Many of these exhibitions were supplemented by public lectures given by Branch officers.

An Eskimo literature program was organized, and additional Eskimo staff are being recruited to undertake activities aimed at stimulating and developing all forms of Eskimo literary expression. The expansion and improvement of the Eskimo language magazine *Inuttituut*, which was undertaken last year, will continue and manuscripts are being prepared for the publication of two complete books in the Eskimo language. A system has been introduced for collecting Eskimo literature (folktales, sagas, poems, songs, etc.) and for identifying, verifying, and protecting folklore manuscripts.

Considerable headway has been made in exploring—in conjunction with the CBC and D.O.T.—the possibility of developing a program to establish small, privately licenced, local radio broadcasting stations in the north. These stations would be operated by volunteers in the community, and will provide programs in the native language.

CORRECTIONS

A medium security institution was completed in Yellowknife in September 1966, and in Whitehorse in December 1966. Early in 1967, minimum security camps were completed and established on site in both Territories. These camps are in the vicinities of Yellowknife and Whitehorse. A treatment centre for juvenile offenders was developed and completed at Fort Smith, N.W.T. early in 1967.

The medium security facilities in both Territories house male and female adult offenders, while the minimum security facilities house adult male offenders only. The treatment centre at Fort Smith accommodates both boys and girls. The adult institutional facilities in each Territory house a maximum of 65 men and 10 women while the treatment centre can handle 16 juveniles.

On February 20th the Yellowknife Correctional Institution and the Fort Smith Treatment Centre inaugurated their services. The Yellowknife Correctional Camp opened its doors one week later.

The corrections programs in both Territories are administered by Territorial staff.

Education

SCHOOL SERVICES

School enrolment in the Northwest Territories and Arctic Quebec increased from 7,280 in 1965-66 to 7,792 in 1966-67. The total enrolment comprises 3,340 Eskimos, 1,371 Indians and 3,081 others. It is estimated that about 1,000 children will reach school age each year over the next three or four years. A school construction program designed to accommodate the annual enrolment increases, as well as those children now without school facilities, is necessary.

Plans were developed in the past year for a new 10-classroom school at Aklavik, a new five-classroom school with large activity rooms at Coppermine and Cambridge Bay, and a 16-classroom secondary school at Inuvik. These schools will be completed in 1968. Other major planning projects included a 12-classroom addition to the Sir John Franklin School at Yellowknife and a 15-classroom school and a 200-bed pupil residence for the new townsite of Rae.

Construction started on the 12-classroom Princess Alexandra School at Hay River and Princess Alexandra will open the school in the summer of 1967 during her visit to the north. A total of 27 additional classrooms were



Eskimo boy learning wood craft.

opened in September 1966. Ten of these were portable classroom units which were taken to various settlements for use until permanent schools are completed.

The department's first pre-school program was started at Frobisher Bay in September 1966, and plans have been made to provide facilities for the extension of this program throughout the school system.

Forty-three applications for financial assistance were approved under the Northwest Territories Financial Assistance for Higher Education Program. Fifteen of the students received both grants and loans. The cost of the program was \$35,674.50, an increase of \$2,378.50 over the previous year. Under the Canada Students Loans Act, passed in July 1964, loan applications totalling \$11,135.50 were approved for fourteen students.

Two \$800 Northwest Territories scholarships were awarded: to Miss Dianne Patricia Douglas of Fort Smith, who attended the University of Manitoba in the Faculty of Arts during 1966-67; and Kenneth James Tyler of Yellowknife, who attended the University of Alberta in the Faculty of Arts. The National Chapter of the Imperial Order Daughters of the Empire offered 20 Achievement Awards, valued at \$25 each, to students in secondary school grades. The awards, which were given for the first time in the 1964-65 school term, are made on the basis of achievement during the school year.

Two \$1,000 scholarships, payable in five annual installments of \$200 each, have been made available to northern students by National Containers Ltd., and Seaway Storage Ltd. The former scholarship will be given to the most needy and worthy student undertaking post-graduate work. The Seaway Storage Scholarship will be given to the best student graduating from the Churchill Vocational School.

VOCATIONAL EDUCATION

The renovated military complex at Fort Churchill, Manitoba, is now used for prevocational training, 150 young people from the Eastern Arctic took courses this year. The boys' shops are located in a remodelled hangar where courses in drafting, carpentry, metal work and maintenance and repair of motors can be conducted concurrently. In addition to the shopwork, the senior boys built and completely finished a five-room house during the year, including the electrical, plumbing and heating installations. All the pupils spend one-half of their time studying the academic subjects related to their prevocational training. The laboratories for the girls' program are located in the classroom wing. The girls' program includes typing, office practice, food preparation, child care, dress-making, beauty culture and home management courses. In order to provide realistic work experience, arrangements were made through the co-operation of the Manitoba Hospital Commission and the CNIB Catering Services to have all the senior girls given on-the-job training as hospital ward aides and as food services assistants.

A total of 213 pupils from the Eastern Arctic lived in the pupil residences at Fort Churchill. Of these, 63 were enrolled as full-time academic students at the Duke of Edinburgh School and the remainder were in the Pre-Vocational Centre.

To assist young adults whose lack of academic training in their early years has inhibited their chances of successful employment, occupational training programs are being offered in several northern areas.

Among these are the programs being offered in Inuvik and Fort Smith. Here the students spend half their school day in on-the-job training and the other half in an accelerated academic upgrading program.

A boat building course in Arctic Quebec and a homemaker assistants' course in Frobisher Bay have helped to prepare another 20 young people for employment. Training in the development of the basic skills required for work in the north, including fabric printing, tourist guiding, ceramics and pottery, sawmill operating, upholstering, tanning, heavy equipment operating and clerical work were available.

At the Sir John Franklin school in Yellowknife, the vocational program is available for the first time and 57 pupils are taking advantage of it. Another 209 pupils in grades IX to XII are enrolled in the academic program.

The Northwest Territories apprenticeship program is proving to be a most effective training tool. A total of 96 certificates of trade proficiency were issued during the current year; 80 as the result of written examinations and 16 on the basis of transfer of provincial or other trade certification. Twenty-six new apprentices were registered, making a total of 83 registered apprentices for the year. Five more occupations were added to the apprenticeship program, bringing the number of affected trades in the Northwest Territories to 25.

Among the newly approved trades are those of launderers and dry cleaners, selection and placement officers, hunting and fishing guides, and northern service clerks.

The department has been giving high priority to the employment of Northwest Territories residents in its northern operations, and has set a long-term objective of filling 75 per cent of the jobs with northern people by 1967. To help achieve this goal 27 classroom assistants were trained in February and March 1967. Thirteen girls from the Mackenzie District and 14 girls from the Arctic District took part in the intensive training programs. They are now working in the classrooms of the schools in their home communities where they assist the younger children to adapt to the school system.

CURRICULUM

The Curriculum Section uses the following principles:

1. Cultural inclusion —every unit of instruction intentionally refers to the child's environment.

2. Cultural enrichment —inclusion of learning experiences and materials to compensate for lacks in the child's environment.
3. Pedagogical selection—teachers select enriching programs and activities which will be interesting and challenging as well as meaningful to the child.

In the last five years the Curriculum Section has prepared over eighty professional documentary aids for northern teachers. Publications which were developed during the year are: Seal Hunt, Let's Begin English, Northern School Library List, Audio-Visual Services Handbook, Guide Book to accompany New Mathematics Workbook.

Related services such as teacher education, special education and research, audio-visual materials, testing and evaluation, and school library are also the responsibility of this Section. Ten teacher-librarians completed a summer training course. Assistance was given in organizing the school libraries at Great Whale River and Fort Churchill. The testing and evaluation services continued the system-wide testing program and the results were processed by the Bureau of Data Processing. Audio-visual services proceeded with the work on two series of filmstrips (The Government of the Northwest Territories, and Northern Co-operatives).

Committees of teachers in northern settlements continued to work on the development, evaluation and revision of new school programs and instructional materials.

Members of the Curriculum Section attended national conferences concerned with their areas of interest and also participated in departmental and inter-departmental committees including the committee on conservation, education and the committee on the care of handicapped children and adults. By invitation and by appointment, members of the Curriculum Section acted on planning committees for the 1967 Boy Scouts Arctic Jamboree and for the various youth participation programs sponsored by the Centennial Commission.

ADULT EDUCATION

The new low rental housing plan for Eskimos required a major adult education program. Following the announcement of the housing program, which is phased over a five-year period, an educational program was planned and materials produced in Eskimo syllabics and basic English. A grant of \$169,000 was received from the Central Mortgage and Housing Corporation in May for research into housing education. A field staff was employed to work in the settlements with the Eskimos. The field work was planned in three parts. The first preceded the construction of new houses and was designed to help the Eskimos understand the terms and conditions of the rental agreement. The second part was conducted before and after the people became

tenants and moved into the new houses. Here the aims were to teach the new skills needed for a different pattern of family living and also to show how to care for the new materials used in the houses. The third part, running concurrently with parts one and two, developed a readiness for active participation in the local management of the housing program. Three orientation courses were held for field staff in June and October 1966, and January 1967.

Part I of this program was completed in ten settlements in the Baffin Region with 509 families or almost 3,000 Eskimos learning about the rental housing. In seven of the ten settlements Part II of the program was underway. Preparatory to the 1967 housing construction, work was done in four settlements in the Keewatin Region where 302 families were helped to understand the benefits and responsibilities of tenants (See table below). Home visits, group and general meetings were used. Interpreters were employed locally to assist the adult education staff since the majority of the people speak only the Eskimo language.

Adult Education Program—Eskimo Rental Housing

Region	Settlement	Eskimo Population	Number of Families*	Part I & III	Education Program Part II & III
Frobisher.....	Arctic Bay.....	100	22	X	X
	Broughton Island.....	200	36	X	X
	Cape Dorset.....	420	64	X	X
	Frobisher Bay.....	1,200	190	X	X
	Grise Fiord.....	94	14	X	X
	Hall Beach.....	142	20	X	
	Igloolik.....	220	53	X	X
	Pangnirtung.....	300	60	X	
	Pond Inlet.....	150	31	X	X
	Resolute Bay.....	124	19	X	
Keewatin.....	Baker Lake.....	549	95	X	
	Chesterfield Inlet.....	180	31	X	
	Eskimo Point.....	451	103	X	
	Rankin Inlet.....	380	73	X	
		4,510	811	14	7

* The Eskimo population and number of families living in a settlement may vary because of movement to and from camps.

Linguistics Section

On October 1, 1966, the Linguistic Services Section was officially transferred from the Welfare to the Education Division. This was done to co-ordinate the Eskimo literacy program in the new orthography with the broader educational programs.

The Eskimo Language Course was revised and reproduced in quantity for distribution to departmental personnel in the north and elsewhere.

The tapes used were re-recorded with two Eskimo voices instead of one as had been the case with the first recording.

Another unit, Unit 12, was added to the Eskimo Language Course in the form of Eskimo dialogues, exercises and drills. These appear on tape as well as in writing. Once again, some 125 hours of Eskimo language instruction, in the classroom and in the laboratory, were given to Northern Service Officers in training in Ottawa.

Several hundred root words were added to the draft copy of the Eskimo dictionary.

The basic research on the language structures was continued in order to serve the needs of an expanded Eskimo Language Course, dictionary and formal grammar.

Plans for an Eskimo Orthography Instructors' Training Program were drawn up. This is to take place next year as a first step in the implementation of the new orthography in northern schools and adult education classes.

Engineering

HOUSING

TERRITORIAL HOUSING

Second Mortgage Program

There are a number of families in the north who could afford National Housing Act housing if available at southern prices. To assist these people, a second mortgage program was started by the Territorial Governments in 1961, using funds loaned to them by the Federal Government. The program is administered by CMHC for the Territorial Governments.

Qualified persons borrowing under the National Housing Act, may obtain a second mortgage loan of up to \$2,000 repayable over the same period as the first mortgage loan and bearing interest at a rate 1 per cent higher than the current NHA rate. As of April 1, 1967, seven such loans have been made in the Northwest Territories to an amount of \$12,006 and 36 have been made in the Yukon Territory to an amount of \$56,600.

Low-Cost Housing Programs

To meet the needs of low income families in the north, a low-cost housing program was established in 1962. Under this program the Commissioners can make loans secured by a first mortgage up to \$6,000, over 20 years at 7½ per cent interest, and a second ten year loan of \$1,000, interest free, which is secured by a second mortgage. The Commissioners can forgive the annual payments of \$100 on the second mortgage if the mortgagor has complied with the provisions of the mortgages.

Because of increasing construction and material costs in the north, the Territorial Councils recommended that the maximum of the first mortgage loan be extended to \$8,000, that the maximum term of the mortgage be 25 years, and that the \$1,000 second mortgage be limited to those applicants building a house valued at \$10,000 or less. This was approved by the Federal Government in August, 1966.

As of April 1, 1967, the mortgage situation for the Territories was as follows:

	N.W.T.		YUKON	
	No. of loans	Am't Loaned	No. of loans	Am't Loaned
Low cost 1st mortgage loans	76	\$ 440,925	37	\$ 219,000
Low cost 2nd mortgage	72	72,000	5	5,000
NHA 2nd mortgage loans	7	12,006	36	56,600

ESKIMO HOUSING

Rental

Late in 1965 the government approved a five-year rental housing program to provide suitable living accommodation to all Eskimos in the Territories. The housing program will represent a large item in the department's budget for several years to come. Its objective is to provide houses according to family size at a rental rate on the family income and resources. Services such as heating, electricity, basic furniture and basic maintenance are included as part of the low monthly rental. To encourage a high standard of participation in the program, and to foster individual and community development, management of rental housing will, wherever possible, be carried out by local housing associations. Officers of these associations will be Eskimos elected annually by the tenants themselves.

Credits will be given for extra rental payments and for improvements and additions to the houses; in this way an incentive will be given toward the goal of eventual ownership. In the summer of 1966, 194 rental units were shipped to the Frobisher Region. It is estimated that in the summer of 1967, another 152 houses will be shipped there and 188 units to the Keewatin Region. Erection on site is accomplished by construction crews hired in the south, supplemented by not less than an equal number of unskilled and semi-skilled labourers recruited locally.

The housing program was set up to coincide with educational and community development projects designed to ensure that those who would receive housing would be prepared to participate in their management and their maintenance. A team of housing educators was hired, with the co-operation and financial assistance of CMHC, to impart the new concepts of rental housing to the Eskimos. This team was followed by home economists who helped the families move into the new houses, taught them how to make the best use of the equipment available in the house and encouraged the Eskimos to make decisions and comments on the program's operation.

Purchase

The goal of the department is to encourage Eskimos to buy only houses suitable to their family needs and they will only be encouraged to purchase houses when they can meet the purchase repayments and provide minimum services. To assist them in purchasing a home however, the department provided \$1,000 subsidy for a one-room and one-bedroom house, and \$2,000 for larger two and three-bedroom houses over 600 square feet in area. The balance of the cost will be covered by the labour of the Eskimos, by funds borrowed from the Eskimo Loan Fund and in some cases by cash.

INDIAN HOUSING

In the summer of 1966, the Northern Administration Branch took over responsibility for Indian housing in the Northwest Territories. In the 1965-66 fiscal year, 77 Indian housing units were built, 89 in 1966-67, and 78 are provided for in the 1967-68 Estimates.

TOWN PLANNING

To provide a continuing program for the rational development of northern townsites, the Engineering Division engages consultants to develop broad plans, and performs more specialized studies using the Division's facilities. During 1966, 19 settlements were the subject of town planning studies. Consultants were engaged in eight of these studies.

Consultant Studies

Final reports have been received for Broughton Island, Cambridge Bay, Igloolik, Clyde River and Fort Simpson. Studies for Fort Resolution and Morphy will be completed by the end of 1967.

Town planning studies of Tuktoyaktuk and Fort McPherson will be started in 1967. The consultant selected for these studies will also continue and complete the study of Aklavik which was begun this year by the Division's Town Planner.

Division Studies

Development plans have been prepared to assist in site selection for housing construction in 1967. Settlements studied in this manner are Frobisher Bay, Cape Dorset, Arctic Bay and Hall Beach. Plans are being prepared to assist the 1968 housing program in Baker Lake, Eskimo Point, Lake Harbour, Rankin Inlet and Frobisher Bay.

AIR PHOTOGRAPHIC AND GROUND CONTROL SURVEYS AND DETAILED TOPOGRAPHICAL MAPPING—SETTLEMENTS, NORTHERN CANADA

Ninety-eight settlement locations are under study to provide a basis for town planning and legal surveys. To date, 162 standard site plans on a scale

of 1"=100' with 5' contour interval showing all physical and cultural features have been completed. During 1966, 15 sites were vertically photographed and precise ground control established at nine settlement locations. Seven settlement locations were legally surveyed.

A five-year plan (1967-72) was prepared for topographic mapping in the Northwest Territories and the Yukon, including shaded contour relief and cultural overlays.

Colour photography was used for two sites in northern Canada; one area in the treed portion of the sub-Arctic and one in the barren lands, to determine the advantages of colour photography over black and white in the field of photo-interpretation of permafrost conditions, soils, construction materials, drainage and water supply.

ARCHITECTURAL SERVICES

The Engineering Division, either by itself or in collaboration with the governments of the Yukon and Northwest Territories designs all departmental buildings in the north. The Engineering Division and the Department of Public Works co-operated in the design and construction of larger projects such as the schools at Aklavik, Inuvik, Yellowknife, Cambridge Bay, Rae, Hay River, Coppermine, the 200-bed hostel at Yellowknife and Children's Receiving Homes at Fort Smith and Inuvik. The drawings and specifications prepared by consultants for a number of projects such as the Centennial Library at Hay River, the Centennial Library at Inuvik and the Separate School at Yellowknife were examined on behalf of the Territorial Government.

Further research was carried out in the simplification of drawings for Eskimo housing. Consultation with and co-operation from the contractors has resulted in lowered costs for construction.

ENGINEERING SERVICES

To meet rising demand, power generation capacity is being increased by the addition of generators and synchronizing equipment. Experiments with recirculating sewage systems are continuing in areas of water scarcity. A new heated water and sewage service line was installed at Rankin Inlet using a utilidette system using light-weight insulated aluminum pipes encased in a corrugated culvert casing.

CONSTRUCTION—NORTHWEST TERRITORIES

In 1966, the following buildings were purchased: 320 low rental houses for Eskimos, 17 welfare houses for indigents, 20 three-bedroom transportable

houses, 25 three-bedroom prefabricated houses, 9 three-bay garages, 1 warehouse, 1 arts and crafts shop, 2 prefabricated one-classroom additions, 9 transportable classrooms, 1 two-apartment unit, 4 power-houses and 1 extension, 1 minimum security correctional camp and a plate freezer. Contracts were awarded for the construction of two classrooms, three apartment units and one office and transient quarters.

The Department of Public Works on behalf of the Engineering Division arranged for the construction of: 1 bulk oil storage tank, 2 offices and transient quarters, 2 heated warehouses, 6 three-bedroom houses, 3 twelve-pupil hostels, 6 apartment units, 1 gymnasium, 2 two-classroom schools and a medium security prison.

In 1966, the Fort Smith Highway, linking Fort Smith with the Mackenzie Highway System and provincial highways to the south, was completed.

Some work was carried out in 1966 on the extension of the Pine Point Highway from Pine Point to Fort Resolution.

Reconstruction of Miles 16-20 on the Ingraham Trail was partially completed and will be finished in 1967. A contract was awarded last November for the construction of Mile 20 to Mile 50.

The extension of the Mackenzie Highway toward Fort Simpson was continued in 1966. A two-year, 50-mile contract was let from the previous terminus at Mile 117 to Mile 167. Grading was completed on 36 miles of roadway, with 16 miles trimmed. Clearing was carried out over 45 miles.

Equipment was purchased in 1966 for the construction of an access road from Coral Harbour to Snafu Beach on Southampton Island.

MECHANICAL EQUIPMENT OPERATIONS

The continuation of the Regional Fuel Oil Policy of distribution to private consumers through the Hudson's Bay Company on a regional price basis has been very successful and resulted in price reductions in all four Regions, the maximum decrease being ten cents per gallon.

Assistance was given to one of the major oil companies in making a study of the market for heating oil in the Eastern Arctic.

Specifications for diesel electric generators of 100 and 150 KW capacity were prepared and the equipment installed in three settlements to meet the constantly increasing electrical load.

The Hovercraft tests at Tuktoyaktuk were observed and the progress of development of this type of craft is being followed very closely to determine when it can be used economically in our operations.

CONSTRUCTION—YUKON TERRITORY

The Medium Security Prison near Whitehorse was completed and a prefabricated Minimum Security Correctional Camp was purchased and

erected. The Willow, Fox and McCabe bridges, ease curve and grade at Mile 282 and pre-engineering work on Miles 52 to 102 were all completed on the Whitehorse-Keno Road. Miles 0 to 50 on the Ross River-Carmacks Road was completed and construction of Miles 92-142 was approximately 10 per cent complete in 1966. A vehicle ferry for use across the Yukon River at Dawson is now under construction and will be ready for trial runs by June 16, 1967.

Towers and a cable-ferry were installed over Pelly River at Blind Creek, 30 miles west of Ross River. On the Canol Road, north of Ross River, bridges at Mile 63.9 and Mile 93.9 were improved, glacier corrections were made at various locations between Mile 0 and Mile 117 and the first 10 miles of the road were re-opened.

Northern Co-ordination and Research

Northern Co-ordination and Research includes the Northern Co-ordination and Research Centre and the Advisory Committee on Northern Development, which are the agencies in the department responsible on the one hand for fostering northern science and technology and on the other for co-ordinating all federal government activities in the north.

The Northern Co-ordination and Research Centre sponsors and conducts research on northern subjects and encourages research by non-governmental agencies. It also collects and disseminates technical information on the north, and operates the Inuvik Research Laboratory which was opened in 1964.

The research sponsored by the Northern Co-ordination Research Centre deals mainly, but not exclusively, with the social sciences. Much of it is undertaken by university scientists and graduate students, working under contract, or as seasonal employees.

The Mackenzie Delta Research Project was the main focus of attention in 1966. It is a multi-discipline program designed to isolate and analyse social and economic factors which impede native peoples from participating in northern development, and to assess the extent to which the native people are making effective adjustment to changes brought about by government and commercial expansion in the north.

The Mackenzie Delta was chosen as an area for intensive study because it is broadly representative of the physical, social, and economic conditions in the Canadian Arctic and Sub-Arctic. This program was planned to be implemented in three phases. The first phase was initiated in the spring of 1965, when four studies were undertaken by a team of specialists in anthropology, economic geography, and technology. These studies were designed to provide the general background data necessary to establish the location of key areas for detailed investigation during the second phase of the program. The second phase, begun in the spring of 1966, sought to explore in greater depth problem areas which were identified in the first phase.

In addition to the work of the Mackenzie Delta Project, a number of other projects were initiated or continued. They included a comparative study of Eskimo administration in northern Canada, Alaska, Greenland, and Labrador; a study of the role of sled dogs in the changing economy of the population of the Eastern Arctic; a bibliography of publications dealing with the design, specifications, and production of Arctic clothing; and participation

with the Defence Research Board in the organization and conduct of hovercraft trials in the Mackenzie Delta.

A grant of \$30,000 was made to the Arctic Institute of North America towards the cost of publishing the Arctic Bibliography.

Grants totalling \$200,000 were awarded in 1966 to 15 institutes and scientific expeditions working in the north. This represented an increase of \$55,000 over the previous year.

The program of grants, which began in 1962, is designed to encourage university research in the north and to assist in the training of northern scientists. Grants are made on the recommendation of a special committee of scientists from the government and universities. The institutes will use the awards for a variety of research projects in many fields of geography, glaciology, oceanography, geology, archaeology, anthropology, sociology, etc.

The Advisory Committee on Northern Development advises the government on questions of policy relating to civilian and military undertakings in northern Canada, and provides for the effective co-ordination of all government activities in the north.



New Imperial Mines' copper ore concentrator under construction near Whitehorse, Yukon Territory.

(Photo: Peter Oomen.)

Northern Resource and Economic Development

The year 1966 was one of the most dynamic in the history of northern development. In the Yukon Territory, two new mines were discovered resulting in several large exploratory programs, and it is expected that the value of mineral production in the Territory in 1967 will increase. Mineral production in the Northwest Territories rose sharply as exploration activities increased in the areas around Coronation Gulf, Great Slave Lake, the Arctic Islands, and Pine Point. Oil and gas operations continued to increase and a large gas discovery, made late in 1966, might well be the most significant such discovery in Western Canada. Several incentive programs were initiated, designed to stimulate and encourage resource development in the territories.

In the Yukon, the Anvil-Dynasty-Vangorda area continued to be the scene of large-scale staking and exploration activity. Nearly 30 companies prospected the area, approximately 10,000 claims were recorded and it is estimated that more than \$5,000,000 was spent on geophysical, geochemical and drilling programs in this area during 1966.

Anvil Mining Corporation Limited continued drilling to outline the Faro No. 1 orebody and are driving an adit to obtain bulk samples of the ore. The Company announced its intention to bring the property into production, subject to certain conditions, and a target date of late 1969 has been tentatively set.

Kerr Addison Mines Limited carried out a drilling program on its nearby Swim Lake property, and continued evaluation work on the Vangorda deposit.

Another large exploration program was initiated by Atlas Explorations Limited in the central plateau region. Base of operations was established at Ross River and a three-part program reached the drilling stage in October. Copper, lead, zinc and silver mineralization has been discovered in several areas and the Company is furthering its program on the same scale in 1967.

Construction was maintained with all phases on schedule at New Imperial's mine site near Whitehorse. Deep drilling has indicated further reserves on the "Little Chief" orebody and the Company is studying various methods to mine the deep ore, which will entail underground mining. Production from the initial open-pit commenced in April of 1967, and contracts were signed with White Pass and Yukon Route to truck and rail-haul bulk concentrates to Skagway by container.

Construction proceeded also at the site of the Clinton Creek asbestos mine of Cassiar Asbestos Corporation. Under the Federal Government's Northern Road Program, an access road was built into the property and the

Dawson-Sixty Mile Road is under reconstruction. Ore reserves are estimated at 14 million tons, and it is anticipated that production will commence in late 1967 or early 1968 at a rate of 60,000 tons of asbestos fibre annually.

Yukon Antimony Corporation Limited drove two adits, but, due to preliminary evaluation of the results and a drop in antimony prices, they suspended underground investigations in 1966. They are now concentrating exploration activities on its Skukum Creek copper showing.

Mount Nansen Mines Limited and Arctic Mining and Exploration Limited continued underground investigation and evaluation of their gold-silver properties near Carmacks and Carcross, respectively.

Hecla Mining Company, Silver Titan Mines and Silver Key Mines investigated silver-lead showings at Bunker Hill, Mount Haldone and in the Ketza River district.

Conwest Exploration Company Limited carried out exploration work in several areas, including extensive airborne geophysical surveys in the area west of Ross River.

Seventeen prospectors operated in the field under the Prospectors' Assistance Program.

With the start of production of New Imperial Mines Limited, the declining trend in the value of mineral production in the Yukon should be halted in 1967.

Discovery Mines closed its Laforma Mine early in 1966, and Yukon Consolidated Gold Corporation had phased out its dredging operations by the end of the year.

Following a curtailment of mining operations and a cut-back in the number of employees, production of silver declined at the operations of United Keno Hill Mines Limited. The value of production rose again, however, in November and December, and a planned shut-down has been postponed for the time being to allow evaluation of small occurrences of new ore.

Yukon Coal Company continued normal production throughout the year.

The following tabulation shows the preliminary production figures for 1966 and comparative figures for 1965:

Mineral	1965		1966*	
	Quantity	Value	Quantity	Value
Gold	45,031 oz.	\$ 1,698,975	40,035 oz.	\$ 1,509,320
Silver	4,615,995 oz.	6,462,393	4,078,223 oz.	5,705,434
Lead	17,851,309 lbs.	2,766,953	16,373,000 lbs.	2,446,126
Zinc	13,247,653 lbs.	2,000,396	9,086,000 lbs.	1,371,986
Cadmium	138,918 lbs.	386,192	105,824 lbs.	253,978
Coal	8,801 tons	85,626	6,000 tons	60,000
TOTAL		\$13,400,535		\$11,346,844

* Preliminary.

In 1966 the total value of mineral production in the Northwest Territories again rose sharply as a result of production from Pine Point.

Continued high interest was shown in the Pine Point area. There was also a revival of interest in the Coppermine region, with heavy staking in both areas resulting in over 21,000 claims being recorded at the Yellowknife Recorder's Office during the year.

Other areas of activity were the Coronation Gulf area, the East Arm of Great Slave Lake and the Arctic Islands. Scarcities and high prices for copper have spurred the search for this metal. Renewed interest has also appeared in the search for uranium deposits.

Baffinland Iron Mines Limited has completed a feasibility study of its high grade iron ore deposits on Baffin Island, although very little actual development or exploration work was accomplished there during 1966. Further studies, sponsored by the Federal Government, are underway.

Texas Gulf Sulphur has achieved encouraging results in its exploration program on a zinc deposit on Strathcona Sound. Cominco Limited and Bankeno Mines Limited jointly carried out a large exploration program for lead and zinc on claim groups and prospecting permit areas on Cornwallis and Little Cornwallis Islands.

In the Bathurst Inlet—Coronation Gulf areas, several companies explored some gold prospects and, in the southern Keewatin, Selco Exploration Limited continued work on their gold showing.

Interest has revived on old copper showings in the Coppermine River area and PCE Explorations, Consolidated Proprietary Mines and the Roberts Mining group, among others, were active with claim staking, continuing throughout the winter months. Negotiations are underway for joint exploration efforts on promising showings.

Twenty-eight prospectors participated under the Prospectors' Assistance Program sponsored by the Federal Government.

The first full year of operation of the concentrator at Pine Point established increased value of lead and zinc for that period. The Pine Point area continued to be the focal point of mining and exploration activity in the Northwest Territories. Literally dozens of companies carried out exploration programs on properties staked during the rush of late 1965 and early 1966. Geophysical methods were highly successful in locating anomalies and many of these, when drilled, proved to be promising ore-bodies.

Pine Point Mines Limited has acquired the adjacent Pyramid Mines Limited ore-body, and will develop Pyramid for production, expanding the concentrating facilities at the same time to handle the output of both mines.

Conwest Explorations Limited and Coronet Mines Limited indicate they may join forces in the construction of a mill. Each company has a moderate sized ore-body.

The four producing gold mines around Yellowknife, namely Giant Yellowknife Mines, Con-Rycon-Vol., Discovery and Tundra Gold Mines felt the adverse effects of increased costs and labour shortages, with no increase in the price of gold, and production of gold decreased slightly.

Silver and copper production again showed a substantial increase, this was mainly due to the production from Echo Bay Mines. This mine, which began production a year previously with only a few months ore in sight, now seems to be becoming established on a more or less permanent basis.

Canada Tungsten's operation in the Flat River area was proceeding well, encouraged by the world-wide tungsten shortages and rising prices, until a fire destroyed the mill in December and halted production. Plans indicate that a new improved plant may be ready by the end of 1967 and production resumed.

The following tabulation shows the preliminary production figures for 1966 and comparative figures for 1965:

Mineral	1965		1966*	
	Quantity	Value	Quantity	Value
Gold	452,479 oz.	\$17,071,580	417,841 oz.	\$ 15,752,606
Silver	1,064,824 oz.	1,490,754	1,952,634 oz.	2,731,735
Lead	165,662,547 lbs.	25,677,695	230,000,000 lbs.	34,362,000
Zinc	189,380,626 lbs.	28,596,474	360,000,000 lbs.	54,360,000
Tungsten ..	3,736,324 lbs.	3,115,909	3,973,000 lbs.	3,226,910
Copper	942,400 lbs.	354,342	1,617,882 lbs.	726,429
Cadmium ..	185,840 lbs.	516,635	200,000 lbs.	480,000
TOTAL		\$76,823,389		\$111,639,680

Oil and gas exploration expenditures in the Yukon and Northwest Territories were estimated at \$25,000,000 in 1966. Much of this exploration was conducted in the southern portion of the territories.

A large gas discovery was made late in 1966 in the Pointed Mountain area of the Northwest Territories. Located about 15 miles northwest of Fort Liard, the well appears to be the most significant gas discovery in Western Canada in 1966. In proximity to the Beaver River area, it will be serviced by a gas transmission pipe-line by 1969. Additional wells are now planned, and when adequate gas reserves are developed, the gas pipe-line can be extended from the Beaver River area in British Columbia to the Pointed Mountain area. Revenues in the form of royalties will accrue to the government when gas deliveries commence.

Continued interest is being shown in the Peel Plateau area of the Northwest Territories and Yukon. Shell Canada Limited and Imperial Oil are in the midst of a large exploration and drilling program. Shell has now completed nine wells in this area while Imperial is currently drilling their fifth well. Other operators will begin drilling operations during the 1967-68 winter

season and it is anticipated that an additional 10 wells will be drilled during this phase of exploration.

There was no exploration activity in the Eagle Plain or in the Liard areas of the Yukon.

Surface geological surveys by the oil industry decreased over the previous year. Much of the sedimentary areas have already been mapped by the major oil companies. Most of the current work that is being conducted is by consultants for clients or for non-exclusive types of reports which are sold to several smaller oil operators holding permits in the territories.

A helicopter-borne and supported seismic party conducted geophysical surveys over the Prince Patrick, Mackenzie King and Borden Islands. This is the first time such a geophysical survey was carried out in the Arctic Islands. The crews have been moved to the Anderson and Horton River areas to undertake a similar program which should last six to seven months. Current plan of the operator is to start drilling operations on the Islands some time in 1968 or 1969.

Several applications have been received for loans under the Mineral Development Loan Fund. The largest request came from a consortium of companies holding acreage in the Arctic Islands. The program, if consummated, would involve the spending of approximately \$30,000,000. This would include the drilling of 20 to 25 wells complemented by a considerable amount of seismic surveys.

The Federal Government's policy to encourage resource development in the north is accomplished through a number of incentive programs.

The Northern Roads Program is a ten-year, \$100 million program designed to provide roads which connect centres of population, lateral roads through areas of favourable resource potential and roads to specific resource development projects. During the year approximately \$9.7 million was spent on roads in the two northern territories.

The Northern Resource Airports Policy provides financial assistance on a cost sharing basis for airport construction to aid resource development.

The Northern Mineral Exploration Assistance Regulations make provision for grants to individuals and corporations who are exploring for minerals and oil and gas in the north. The regulations are intended mainly to encourage companies, which are not eligible for the mineral exploration incentives provided in the Income Tax Act, to invest in the north, but limited assistance is available to mining and oil and gas companies. At the year end, 27 applications had been received, six of which were approved for grants totalling approximately \$340,000.

With the objective of attempting to increase the amount of metal processing that is being done in the north, the government commissioned a study to determine the feasibility of providing lead-zinc smelting facilities at Pine Point, N.W.T.

Financial and engineering evaluations were carried out during the year on a number of proposed mining developments in the north where Federal Government financial assistance had been requested. A computer program was developed which permitted a more thorough assessment of these projects.

The Resource Management Division is charged with the administration of the residual interest of the Federal Government in many parcels of Public Lands in southern Canada, comprising former Military and Naval Reserves, together with other sites required for special projects. In addition, it maintains records pertaining to the disposal of millions of parcels of Dominion Lands in the Prairie Provinces, plus the Railway Belt and Peace River Block of British Columbia. The Division also correlates reports on behalf of all Branches to the Real Property Inventory of the Public Works Department, Crown Assets Disposal Corporation and the Municipal Grants Section of the Department of Finance. Finally, the Division is implementing a program for the acquisition of rights which will ensure the preservation of water-fowl habitat on vast tracts of privately-owned property throughout the country.

During the fiscal year 1966-67, approximately \$21,000 was derived from the lease, sale, or other disposition of Public Lands, while numerous parcels of inestimable value were made available to other federal agencies. Research into the basis of land ownership has been accelerated, and claims on sixteen properties were validated with full legal documentation. Twenty-seven chronological reports on land settlement were compiled for historical or archival projects, and thousands of enquiries in respect of property rights were answered. Three hundred and sixty Libers of Letters Patent, each containing about 500 folios, were micro-filmed, and 23,000 files or documents relating to Metis Scrip, Military Bounty, Manitoba Act grants and Dominion Lands policy were indexed. Ninety-one certified true copies of Letters Patent were prepared as the basis for proof of property ownership, and hundreds of other documents were photostated as evidence that settlers had received their full entitlement.

A form of contract for easements to protect wetlands of farms in the Prairie Provinces was approved, and all preliminary steps were taken to expedite introduction of the waterfowl conservation project in the target areas selected for 1967-68.

An inventory of lands along the line of the Rideau Canal system is being completed, to determine whether or not a waterways park could be established under joint Dominion-Provincial sponsorship.

The Economic Staff Group, one of the two divisions which comprise the Resource and Economic Development Group, was formed to provide advice to departmental management on northern economy, and to undertake economic studies. While,—during 1966—the Group was small and understaffed, it was nevertheless quite active. A general review of the economy of the Yukon Territory was prepared for incorporation in a fact-book entitled "The

Yukon Today", which the department intends to publish shortly. This review is intended to serve a number of purposes, including the provision of some factual background material for a comprehensive economic study of the Yukon Territory which is soon to be commissioned jointly by the department and the Government of the Yukon Territory, with each party bearing half the cost.

Another study of general interest in which the Economic Staff Group is involved is an examination of a number of alternative routes to tidewater from present and potential resource producing areas in the Yukon. This study is being undertaken by Travacon Research Limited, a Calgary consulting firm, and is expected to be completed by June 1967.

A test manpower survey of the Northwest Territories will be undertaken in the summer of 1967, and much of the preparatory work for this project was done during the 1965-66 fiscal year. This survey is being conducted as a co-operative venture by the department and the Dominion Bureau of Statistics.

In addition to the foregoing projects, considerable time was devoted to handling a wide variety of ad hoc projects and to the compilation of basic statistical records on the northern territories. It is intended that the Economic Staff Group will become a primary source of information on the northern economy during the next few years.

INDIAN AFFAIRS



Dan George and Nancy Sandy, two Canadian Indians, play in "The Education of Phyllis", which was awarded best entertainment film for television at the 16th Annual Canadian Film awards.

Indian Affairs Branch

During the 1966-67 fiscal year, steady progress was made by the Indian Affairs Branch towards its main objective of ensuring equality of treatment and opportunity for Indians in terms of education, occupational skills, economic development, health, self-government and cultural identity. Branch expenditures on this work increased to \$104,730,594 from \$81,684,227 the previous year.

Approximately \$52,000,000, or 50 per cent of all funds voted by Parliament for the work of the Branch was allotted to the education program, the most vital single effort. At the close of the year, 95 per cent of all Indian children of school age were attending school. For the first time, the enrolment of Indian children in provincial schools exceeded that in federal schools. High school enrolment showed a slight increase. The number of students in universities increased to 240; 2,529 students were given training in various trades; a total of 3,797 Indian adults were enrolled in adult education programs and 3,634 in upgrading programs. These figures represent the largest number of students ever registered in these programs.

Of particular importance is the development of the kindergarten program. Several years ago a small beginning was made with the establishment of a few kindergarten classes in Indian schools. Today, kindergarten is being given to approximately 3,800 pupils, or approximately 40 per cent of the Indian children of kindergarten age, in federal and provincial schools. The program is being extended steadily.

Some \$16,000,000 of the \$112,000,000 five-year Community Improvement Program, approved in March 1966, was spent on housing, the provision of water and sanitary services, rural electrification and the construction and improvement of roads to and on reserves. Some 1,770 houses were built and 1,569 were wired for electricity. Roads built on Indian reserves totalled 343 miles. An off-reserve housing program was developed to assist Indians in purchasing houses near places of employment.

The grants to bands program was greatly expanded from \$66,892 in the previous year to \$445,306 this year. These grants are designed to encourage the transfer to bands, the authority, responsibility and financial resources which will enable them to do for themselves many of the things the Branch is now doing for them. Steady progress has been made in the development of band self-government. Twenty-five bands assumed control over the management of their revenue funds during the year. There are now 137 bands which have taken this step.

There was continuing consultation with the Indians on matters of concern to them. During the year, the eight Regional Indian Advisory Councils established in the Maritimes, Quebec, Ontario, Manitoba, Saskatchewan, Alberta, British Columbia and the Yukon and the Northwest Territories met a total of nineteen times. The National Indian Advisory Board held its first meeting in January 1966 and met twice during the year. Proposed amendments to the Indian Act have been the main topic discussed at these meetings.

Education Directorate

This Directorate has the overall responsibility and authority for the provision of education services and programs, both for Indian children and adults. It is also responsible for the development and co-ordination of the education policy and the direction and planning of operating procedures.

A year of marked growth in Indian education was recorded. Public interest was stimulated by a large volume of newspaper comments, numerous research projects, and the tabling of Part 1 of the Hawthorn-Tremblay report on the Indian people. The Indian school enrolment increased from 61,395 to 64,439. The attendance at provincial schools was 32,941 while 31,498 Indian pupils attended schools operated by the Branch. For the first time the enrolment in provincial schools exceeded that in federal schools.

The Branch operated 1291 classrooms in 355 schools for Indian children compared with 1275 classrooms in 391 schools in the previous year. High school enrolment showed a slight overall increase but there was a small decline in Grades XII and XIII. There were 1549 teachers employed by the Branch, 50 more than in the previous year. The increase is accounted for by an expansion in guidance services for Indian students in high school, vocational training, and university programs.

The teachers' salary schedule was revised effective September 1, 1966, to provide regional rates of pay replacing the national scale. New regional rates were also established for the 1967-68 school year reflecting the general increase in teachers' salaries across the country.

A supervisor of library services was added to headquarters staff to initiate a community library program. These community libraries will be established on reserves and will be organized and operated by a local library board under provincial legislation. The supervisor acts as a consultant to the Indian library boards, advising them on legislation, finance, library accommodation, and librarian training. There is a widespread interest in these community libraries. Several libraries have been set up and others are under consideration.

A comprehensive testing program was carried out by the language arts specialists which covered all aspects of the teaching of English in the federal schools. New, improved methods of instruction have been introduced over the past seven years which have raised the level of achievement and over-

come many of the difficulties experienced by Indian pupils in learning a new language. The report on this testing program provides encouraging data on pupil progress and gives direction for remedial measures to deal with weaknesses in language instruction. The supervision of this language instruction program was strengthened by the employment of six additional language arts specialists, bringing the total number to 12.

The number of active Indian school committees continues to grow. During the year, approximately 60 were participating in local school affairs. At the annual conference of school committee delegates, held in Saskatoon, resolutions were passed recommending that the responsibilities and authority of these committees be enlarged. These resolutions are under active consideration and will be of assistance in preparing the revised regulations to be issued in 1967. Some school committees have assumed responsibility for school attendance, school lunches, transportation, and extra-school activities, and have gained strong community support and enthusiasm for the impetus their work has given to education.

The provision of kindergarten instruction for Indian children is one of the major concerns in the education program. Several years ago a small beginning was made with the establishment of a few kindergarten classes in Indian schools. Today kindergarten is being given to approximately 3,800 Indian children in federal and provincial schools, an increase from 3,660 during the previous year. It is interesting to note that this number represents only 40% of the five-year-old population. The records show that since the establishment of kindergartens the Indian children who have received this instruction are better prepared and able to cope with the Grade 1 program. It is intended to continue to expand this program by purchasing this service wherever possible from private or provincial schools where such programs are available and accessible or by establishing classes in federal schools.

There was a substantial rise in the amount of accommodation required for Indian pupils in provincial schools. Agreements were entered into with over 50 school boards across Canada to purchase classroom space for 4,548 pupils. Capital contributions representing partial payments under these agreements amounted to a total of \$4,145,000 during the year. It is anticipated that the growth of the joint school program will continue to accelerate to meet the needs of Indian children enrolled in provincial schools.

At the request of the Branch and the Alberta provincial teachers working with Indian pupils, a special "Intercultural Education Program" was inaugurated at the University of Alberta. The program provides pre-service training for teachers of Indian pupils and includes practical application as well as theory. Each student must spend two summer periods working with people whose cultural background is different from his own. During the summer the Indian Affairs Branch offered five such "practicums" to prospective teachers and provided educational bursaries to those who continued in the program. The program has proven to be popular, as well as valuable, and

the Branch will double its support for this training program in the coming year.

The schools in the Forest Conference, inaugurated in 1963 by the Northland School Division of Alberta and the Indian Affairs Branch, was sponsored this year by the Province of Manitoba. Representatives from the Ontario Department of Education attended for the first time indicating increasing concern about education in the north. This conference, which encouraged and promoted improvements in the education provided Indians in northern Canada, has been most effective in obtaining the active participation of provincial government agencies in attempting to solve problems facing Indian education today.

Special school units have been established in northern Saskatchewan and Manitoba. Pre-service and in-service training programs are now offered at the Universities of Saskatchewan and Alberta, respectively, and extensive research into curricula has been carried out in all three provinces. This year's meeting emphasized the provision of training programs for young Indian adults which would prepare them for immediate employment.

In those areas where joint education has not been possible as yet, the construction of federal schools for Indians continued. During the year there were 114 federal school construction projects which included 121 classrooms, 51 teaching staff units, and 47 other projects such as major renovations and improvements to water and sewerage facilities in existing schools. Total expenditure for this program was approximately \$6,100,000.

Daily transportation was provided, where necessary, for Indian pupils attending provincial schools and centralized federal schools. There were 22,323 pupils transported at a cost of approximately \$2,500,000. The transportation was arranged through 486 separate contracts, over 200 of which were with contractors of Indian status.

During the year, with the full utilization of the resources of the Department of Manpower, continued emphasis was placed on the further development of vocational training, employment, and relocation opportunities for Indians. Assistance was given to that department in working out plans for the implementation of seven pilot projects for the relocation of 140 Indian families. These, along with a similar project initiated by the Education Directorate involving 20 Indian families at Elliot Lake, will provide experience and insight with respect to relocating Indian families off reserves which it is hoped will accelerate the movement of Indians to areas of high employment.

During the year, 2,529 students were given training in various trades. A total of 3,797 Indian adults were enrolled in adult education programs while 3,634 were enrolled in upgrading programs. The number of students enrolled in universities has increased to 240. The above figures represent the largest number of Indian students ever registered in these programs.

Responsibility for training and placement was transferred during the year from the Resources and Development Division to the Education Directorate since it was felt that the placement of Indians in employment was a natural corollary to the training program. During the year, 2,357 Indians were placed in regular employment and 8,231 were placed in short term or part-time employment.

Development Directorate

This Directorate co-ordinates and is responsible for the community development program, the development of social programs, the resources and industrial development programs, and engineering and construction projects on reserves.

SOCIAL PROGRAMS

Community Services

The Branch operates a community services program designed to promote and assist the social development of Indian communities. This includes the development of local self-government, through the provision of financial grants, leadership training and community development projects; and as an out-growth of a developing social environment, the development of individuals better able to participate in the general life of the country.

The Community Services Section is responsible for providing a corps of skilled community development personnel and assisting in the negotiation and administration of cost-sharing agreements with the provinces for community development work where the provinces are willing and able to carry out such work.

During the year, cost-sharing agreements were signed with the provinces of Ontario and Alberta to provide for the extension of provincial community development services to Indian communities. In addition, community development services were provided to a number of bands in Manitoba and Saskatchewan by provincial personnel under special project area submissions whereby costs are shared by the Indian Affairs Branch. Payments by the Branch during the year for community development services provided by the provinces amounted to \$146,931.

In Nova Scotia, community development services were provided on several reserves by the Extension Department of St. Francis Xavier University under contract with the Branch.

Forty-eight Branch community development officers, seventeen of whom were Indians, operated in areas where provincial services were not being provided.

Other responsibilities of the Community Services Section include the operation of a grants program to enable bands to gain program management experience and to employ staff to assist in the administration of their own affairs. The cost of the program rose from \$66,892 in 1965-66 to \$445,306

in 1966-67. The majority of the 110 grants were for the employment of band staff.

The grants program is designed to encourage the transfer to bands of the authority, the responsibility and the financial resources which will enable them to do for themselves many of the things the Branch is now doing for them. Necessary scope is offered to the band councils to plan their own projects and to execute their plans themselves. Although it is expected that band councils will seek technical and professional advice from time to time regarding the management of the grants, it is the council and not the agency office which is responsible for the funds that are used. Cheques for band grants are made payable directly to the Band Councils for deposit in their own bank accounts.

Training courses are provided by the Branch whereby Indian leaders and band staff may learn the financial, legal, technical and other skills necessary for the management of community affairs. In addition, provision is made for Indian leaders to meet with each other to discuss common problems and concerns, and to meet with non-Indians for the purpose of developing mutual understanding and co-operation. The program is administered in each region by the Regional Community Development Training Officers. During the year, authority was obtained to enter into service contracts covering employment of resource personnel for the purpose of conducting seminars and training programs. Treasury Board authority was also granted for the payment of tuition fees, living allowances, school supplies and transportation expenses for course participants and for the payment of honoraria to Indians attending courses who cannot obtain leave with pay from their jobs.

The facilities of various institutions including the extension departments of universities were employed in the Indian Leadership Training Program. As in previous years, the resources of the Coady International Institute, St. Francis Xavier University, Nova Scotia, were used. A number of Indian students from various parts of Canada attended the Social Leadership Course which was sponsored by the Indian Affairs Branch.

A community development training seminar was held at Laval University during the months of April, May and June. Thirty-one members of the Indian Affairs Branch attended the seminar, including a number of Agency Superintendents, Assistant Superintendents and resource personnel, as well as Branch Community Development Officers.

In August, Community Development Officers from across the country attended a five-day community development workshop in Ottawa where they had an opportunity to exchange views with each other and with other members of the department.

Cultural Affairs

The objective of the Cultural Affairs Section is to preserve and stimulate the growth and expression of Canadian Indian culture through research, documentation, and the promotion of graphic and performing arts.

During the year the Documentation Research Centre, designed to centralize all available knowledge about Indians of Canada, employed persons on contract to document and classify material by tribal identification. The Recording Unit, which forms an integral part of the Documentation Centre, was designed to collect, on tape, recordings of Indian drumming, singing, legends, stories, etc. Classification of the material has been completed.

The promotion of Indian culture in both the traditional and contemporary forms of music, dancing, painting, sculpture, etc. is supported through grants to individuals and organizations participating in these forms of expression. During the fiscal year, grants amounting to \$32,750 were made.

The Indian Affairs Branch purchased Indian paintings, pottery, and sculpture valued at \$5,950 for the purpose of establishing a permanent collection. Exhibitions were arranged to achieve recognition for contemporary Indian artists.

A workshop, sponsored jointly by Cultural Affairs and the Centennial Commission, provided an opportunity for 21 editors of Indian publications to acquire basic knowledge of journalism and printing techniques.

The Cultural Affairs Section participated with the EXPO '67 Task Force in selecting nine Indian artists from across Canada to paint four circular murals, one circular ceramic mural, and three major murals on the panels of the Indians of Canada Pavilion. Schedules were maintained and the Pavilion completed in time for the official opening of EXPO '67.

Welfare Services

The ultimate goal of the Indian Affairs Branch in the welfare field is that welfare services and benefits comparable to those provided other residents of the provinces, are available to Indians. It is considered that the objective can best be achieved by the participation of Indians in the full range of welfare programs established in the provinces. Implementation of a federal-provincial cost-sharing agreement for welfare purposes with Ontario is now taking place. The Indian Affairs Branch, in collaboration with the Department of National Health and Welfare, is pursuing similar agreements with the other provinces. The enactment of the Canada Assistance Plan, with special provisions for federal cost-sharing of Indian Welfare, represents an important step in this development.

In the meantime, a welfare program financed and administered by Indian Affairs Branch provides social assistance (food, clothing, shelter) for Indians at rates and under eligibility conditions similar to those which apply in the provinces.



A well preserved totem pole at Alert Bay, B. C.

(Photo: Richard Harrington.)

Child welfare maintenance and protection services are provided for Indian children through agreements with the governments of Manitoba and Nova Scotia. Indian Affairs Branch also pays the cost of maintenance of Indian children in foster homes or institutions wherever child care agencies provide services on a voluntary basis.

In areas where care services are not available to Indian children, Indian Affairs Branch staff, with the consent of parents or guardians, arrange for care of neglected children outside their own homes.

Maintenance in homes for the aged and other institutions for physically and socially handicapped persons is made available by Indian Affairs Branch to persons who need care due to senility or chronic illness.

Through agreements with the Alberta Tuberculosis Association, the Saskatchewan Society for Crippled Children and Adults, and the Manitoba Sanatorium Board, Indian Affairs Branch assumes financial responsibility for full maintenance and tuition on behalf of Indians participating in upgrading and social orientation programs arranged by these organizations.

In addition to the welfare program, financed and administered by Indian Affairs Branch, services and benefits available to Indians include Family Allowances, Youth Allowances, Old Age Security and Guaranteed Income Supplement, administered by the federal government; Old Age Assistance, Blind Persons' Allowance and Disabled Persons' Allowance financed jointly by federal and provincial governments; Needy Mothers' Allowance in Quebec, and provincial assistance to Indian adults and abandoned Indian children in Nova Scotia.

RESOURCES AND INDUSTRIAL DEVELOPMENT

Of the 225,000 Indians in Canada today, some 180,000 are resident on reserves or Provincial Crown Lands and are dependent upon renewable resources for much of their earned income. This is a rapidly growing population and in many areas, their numbers are in excess of the capability of their resource base to support them at satisfactory income levels.

Programming on behalf of these people in respect to their lands and their resources is designed wherever possible to help them to improve their methods of resource utilization and to assist them to develop new resource potentials by means of research, through the provision of grants and loans and by the extension of technical advice. Such assistance covers all fields of resource use and other entrepreneurial endeavour.

Agriculture

The development of agriculture on Indian lands during the year was encouraged by financial assistance as well as technical and managerial advice provided to the Indian people. Both federal and provincial advisory services were used extensively.

The Branch provides seed, fertilizer, insect and weed control chemicals, oil and gas and helps in many cases with the purchase of farm machinery, repairs and construction of granaries and veterinary services.

Under various national programs, such as the Prairie Farm Rehabilitation Act (PFRA), the Indian people are eligible to share in benefits on an equal basis with others. In projects undertaken by the Agricultural Rehabilitation and Development Act (ARDA), provision is made for the provinces to include Indian Bands and lands.

The Indian Affairs Branch operates a Rotating Herd Program for the Indian people. A herd of breeding cattle is loaned to an Indian farmer for a two or three year period. The calves from the original stock form the basis of his own herd. There are 295 herds containing upwards of 4,700 cattle. The program is particularly active in the western Provinces of British Columbia, Alberta, Saskatchewan and Manitoba.

Other financial assistance was given for agricultural purposes through the Revolving Fund Loan system operated by the Branch. During the year, an amount of \$179,150 was made available to 55 Indian farmers.

Craft Industries

Many Indian people in every province across Canada, individually and collectively, own and manage commercial businesses handling native crafts. These include enterprises where the goods are partly or fully manufactured and craft retail outlets located on Indian reserves. On an annual basis, the estimated value of craft industries operated by the Indian people is close to \$1½ million. By and large these industries are started by the Indian people themselves who carry out their own production and marketing programs. However, when requested, the Indian Affairs Branch will lend them assistance. Such assistance may be in the form of a loan or an advance in order to stimulate or create new businesses. The Branch also operates a craft centre where raw materials are purchased in quantity and sold at cost to the Indian people. In addition the centre serves as a national promotional outlet at buyers' gift shows held in Toronto and Montreal. Art and craft items are frequently loaned to outside interests for display purposes as well.

Since the development program has been decentralized to the regional level, officers work closely with the Indian people in planning the best types of assistance required. During the year, the Indian Affairs Branch assisted with loans, development funds or technical help to establish craft retail outlets at Williams Lake and Moricetown, B.C.; craft centres at The Pas, Manitoba; Caughnawaga, Quebec; combined craft centre and workshop at La Ronge, Saskatchewan; Curve Lake, Ontario; workshop at Village Huron, Quebec; a Cultural Centre and production facilities at Alert Bay, B.C.; a marketing program and outlet at Edmonton, Alberta; and also marketing and promotion programs at Big Cove, Nova Scotia.

As a means of promoting sales of their crafts, Indian people are particularly active at fairs and exhibitions. Examples are the Atlantic Winter Fair, the Canadian National Exhibition, the Red River Exhibition, the Calgary Stampede, Edmonton's Mukluk Mardis Gras, and The Pas Trappers' Festival. Financial aid is provided by the Branch if needed. One important feature of the Branch program is that provision is made to guide Indians engaged in the craft business. A major project completed during the year was a nation-wide survey for information on the production and marketing of Indian crafts. During this study, which was financed by ARDA and co-ordinated by the Branch, more than 350 Indian craft producers and urban retailers were interviewed across Canada.

Small Businesses and Co-operatives

The policy of the Branch is to assist Indian people to become established in business or as entrepreneurs. To stimulate this development the Branch has provided financial assistance through loans and grants. Supervision and technical assistance is provided to Indians in the process of establishing businesses and on operational and financial matters. A great number of feasibility studies were carried out leading to the establishment of Band as well as individual Indian businesses. Larger business projects such as a national marketing program for Indian handicraft received close attention during the latter part of the year. The Caughnawaga Band started production of a new humane trap, designed by the National Research Council.

There are more than 125 co-operatives where the members are predominantly Indians. These co-operatives situated on the Prairies and in Quebec are giving new economic benefits to Indians. These co-operatives are in the production, distribution, consumer and servicing fields. Credit Unions and Caisse Populaires are increasing steadily in numbers. It is expected that co-operatives will play an increasingly important role.

Tourist Development

Many Indian reserves occupy strategic locations, or contain highly desirable sites, that can be developed to meet the burgeoning need for recreation areas in Canada. Generally, these development opportunities occur in areas where alternative land uses are restricted or marginal.

The Branch has launched an evaluation program to assess sites that appear to have potential and where feasible, have assisted the Indian people in developing the area as a tourist attraction. Frequently, Indian entrepreneurs are encouraged and assisted to take advantage of the further opportunities these sites provide for the sale of their arts and crafts.

Land Use

The Branch has embarked on a program to assess the revenue-producing capability of Indian lands for multi-use to ensure maximum benefit to the Indian people from use of their land resources. Last year, thirty-eight land-use surveys were completed.

To a great extent the Indian people are encouraged to participate in planning the development of these resources. Through grants from Indian Affairs Branch, bands engage their own consultants and with this guidance prepare plans suited to local needs.

Services of ARDA, ADA, ADB, as well as other federal and provincial agencies, are being utilized wherever possible, to augment the efforts of Branch specialists in advising Indians as to the most beneficial uses of their lands.

At present there are in the neighbourhood of 9,144 leases in effect on Indian lands comprising approximately 1,075,330 acres.

Mineral Resources

Indian Bands derive much financial benefit from the exploration and development of their oil and gas resources. While the main activity is centered in Alberta, there is increasing interest in Saskatchewan where the promise of deep oil and gas discoveries has spurred exploration throughout that Province. Indian Bands in British Columbia, Manitoba and Ontario have also received rental revenue from oil and gas rights.

The revenue for all provinces during 1966-67 amounted to about \$3,300,000—comprised of \$1,550,000 in royalties, \$850,000 in bonuses and \$900,000 in rentals. Rentals and royalties increased over the previous year, whereas bonus revenues declined as a result of the fewer sales of rights. Other Band revenues related to oil and gas developments included payments for surface leases, easements and right of entry for geophysical exploration.

A number of companies continue to operate pilot recovery projects for heavy crude oil areas near Indian reserves in the Saddle Lake Agency.

It is expected that oil and gas developments on Indian reserves will continue at a high level or increase in the near future. This expectation is supported by the large amount of Indian land under permit; about one and one-quarter million acres are held under 55 active oil and gas permits.

Band Councils are acquiring a greater understanding of petroleum management through sending representatives to attend the sales of rights and to observe procedures at the Minerals Office in Calgary.

Although there are not yet major mining activities on Indian reserves, preparations are being made to develop the mining resources. Policy is being amended to provide greater opportunity for the Indian bands to take part in the management. Special evaluations are being made of areas which have attractive economic potential. Mining areas of Ontario, British Columbia and Saskatchewan are at present receiving attention from industry.

Wild Crops

The wild rice crop has been very poor for the past several years due to high water in the northwestern Ontario and eastern Manitoba producing areas. Efforts were made last year in Saskatchewan, Ontario and Quebec to

extend the producing areas to provide more diversified and consistent production. Considerable success has been achieved and new rice fields should be producing in two or three years.

Greater attention was given to blueberry harvests. During the year several new areas were utilized for the first time on a limited scale. Efforts were made to determine the major producing areas and to assess the economic feasibility of marketing these crops.

Wildlife

Indians harvest approximately 50 per cent of Canada's wild fur crop, valued at about \$13,000,000. The estimated 11,000 Indian trappers engaged in this work operate mainly in the remote areas of the country. For many the fur crop provides their main source of income.

Joint Federal-Provincial Fur Agreements were in effect in Saskatchewan and Manitoba and informal working agreements were effectively maintained in other provinces during the year. To improve Indian income opportunities the Branch co-operated by promoting the use of wild fur in order to maintain and improve the demand both at home and on foreign markets. The field program emphasized the need for more effective and efficient trapping operations, increased individual production, improved pelt preparation, and more effective marketing. A modest start was also made to develop greater mechanization of trapping operations in order to improve mobility, tap wider areas of production and enhance individual efficiency and income potential.

Tourist Outfitting and Guiding

In many areas of Canada, sports hunting and fishing provides extensive income opportunities for Indians, both as guides and in other ancillary occupations. The increasing leisure time available to North Americans, and subsequent demand for recreation, provides an excellent opportunity for Indian employment and income catering to sportsmen. During the year, several guide-training courses were held across Canada and progress was made in establishing Indians as tourist outfitters. Indians now operate a big game camp in the Yukon, several fishing camps, a sports whaling camp near Churchill, and several goose hunting camps, examples of which are the Fort Severn Camp in Ontario and the James Bay Camps in Quebec. Emphasis was placed on the selecting and assessing of additional sites for Indian operated tourist camps catering to sports hunters and anglers.

Fisheries

There are approximately 7,000 Indian men engaged in varying degrees in the commercial production of fish, on both inland and coastal waters; the resulting income to these Indians is estimated at about \$10,000,000 annually. During the year, the Branch has been actively assisting Indian fishermen to improve their productive capability and marketing position, and to enable them to secure adequate equipment and shore facilities. The fisheries program includes business and technical training, loans or grants for equipment

and shore installations, management and supervision of fishing operations, and guidance to individuals or groups of Indians to enable them to market their fishery products effectively. The program has been in effect for several years and it is gratifying to note that several groups who were assisted early in the program, are now operating entirely independent of Branch supervision and assistance.

Forestry

Forestry operations on Indian reserves are an important source of revenue to the Indians and to their Band Funds. Timber dues to Band Funds amounted to \$694,446, a decrease of \$336,833 over the previous year.

There were 13 active timber licences, eight in British Columbia, four in Ontario and one in Quebec. No new timber licences were issued and seven licences in British Columbia were not renewed on expiration.

The Department of Forestry and Rural Development conducted forest management surveys on the Manitoulin, Dokes and Maniwaki Indian Reserves. Reports on these, while not yet available, are anticipated in 1967.

Over 800,000 seedlings were planted on Indian reserves in Ontario with the co-operation of the Ontario Department of Lands and Forests. Since the inception of the reforestation program, 5,500 acres have been so planted in Ontario.

Forest Fire Protection & Suppression Agreements were in force in New Brunswick, Ontario, Manitoba, Saskatchewan and British Columbia, and others were being negotiated with Alberta, Quebec and Nova Scotia. Again, there were no serious forest fires on Indian reserves.

The Chilcotin Indian Forestry Training Centre opened during the year and the first trainees were inducted in September. This school provides training in all skills associated with forestry with the aim of placing graduates with industry in skilled or semi-skilled positions.

The Branch's housing program has created the need to make use of the reserve forests and licenced Crown forests for logs and poles. Sawmills have also been established on many reserves to convert the logs to lumber. Most of these activities have taken place in the more northerly areas where building materials are expensive and difficult to transport. The effect of this program has been to increase employment to Indians in areas where job opportunities are scarce.

ENGINEERING AND CONSTRUCTION

The Engineering and Construction Division provides a great variety of services to every region in Canada through a central professional and administrative staff at Headquarters assisted by field engineers and technical officers attached to Regional Offices.

A large part of the work has been in the field of education—in the design, construction, repair and upkeep of works and buildings, to meet the

demand for improved educational facilities. The Division is responsible for the physical development of all Indian reserves, including design of Indian homes, preparation of properly planned communities, design and installation of water and sewerage systems, design and construction of roads and bridges, installation of electric power services and designs for recreational facilities. The Division is also responsible for supplying field office accommodation, fire protection facilities, and heavy equipment for maintenance of capital assets.

Planned Communities

In order to achieve the best results from expenditure of public funds it is necessary to co-ordinate all aspects of the reserve improvement program. Community planning is essential.

In recognition of this necessity, a Community Planning Section has been added to the Engineering and Construction Division of the Development Directorate. The first role of the Community Planning Section is to provide community planning services: i.e., to conduct planning surveys, to prepare community plans and to provide a continuing planning service for reserves.

The second role of the section is to recommend procedures in matters affecting the physical development of reserves for such things as:

- (1) Subdivision of land.
- (2) Employment of planning consultants and establishing their terms of reference.
- (3) Involvement in adoption of community plans by band councils and their review at the Agency, the Regional and the Headquarters level.

The third role of the section is to encourage the proper planning of Indian reserves by band councils and other reserve residents.

In order to provide for the orderly and economical development of the physical community, it is necessary to develop, in conjunction with each Indian band, a community plan which will provide for water and sewer services for minimum basic sanitation, electricity to provide light for productive leisure activities and study purposes, power for small appliances and communications and industrial development, roads to provide mobility both on and off reserves to schools, areas of employment, or to market, and the construction of housing accommodation of adequate size to meet family needs.

To develop and prepare "planned communities", the services of town planners, architects, engineers and surveyors are required, in addition to those services provided by the Branch. These services are obtained from consulting firms, but increased supervisory staff is required by the Branch to ensure proper utilization of the assistance provided.

During 1966-67, forty new community planning studies were begun. A total of thirty-eight preliminary or final studies were completed. These in-

cluded engineering studies for water and sewer services and roads, planning studies and housing layouts as well as other studies dealing with special problems. It is anticipated that approximately sixty-six community planning studies will be initiated during 1967-68.

In January 1966, a \$112 million program, designed to improve the physical conditions of Indian communities, was approved. The fiscal year 1966-67 saw the five-year program inaugurated and house construction gained momentum as the year progressed. An important aspect of the program is the role to be played by Indian chiefs and councillors. This role includes determination of priorities and in some cases administration of development funds. Other important aspects of the program are improved standards of construction, development of procedure designed to enable Indians to borrow money through Central Mortgage and Housing Corporation for construction of homes and conditional grants for the re-establishment of Indian families—(Off Reserve Housing).

The Indian Affairs Branch physical development of Indian communities program for 1966-67 included:

General	\$ 1,040,173
Community Planning	97,473
Indian Housing	9,365,505
Road Systems	2,451,469
Water Systems	1,408,945
Sanitation Systems	200,809
Electrification	981,059
Community Employment Program	847,787
Miscellaneous (Wharves, bridges, etc.)	483,997
TOTAL	\$16,877,217

NOTE: Approximate expenditures since the final accounting reports have not yet been issued.

A total of 219 contracts of all types were processed during the year with 133 completed and 86 uncompleted as of March 31, 1967.

Achievements in the field of physical development of Indian reserves during the year were as follows:

Total number of houses completed during the fiscal year	1769
Houses wired for electricity	1569
Indian reserves provided with community electrification during the year	75
Indian reserves provided with community utility (sanitation) services	58
Number of houses receiving pressurized water during the year	492
Number of miles of road on Indian reserves completed during the fiscal year	343

Policy and Planning Directorate

This Directorate is responsible for establishing guidelines for setting long-term objectives and goals, clarifying priorities and co-ordinating and adjusting programs. This responsibility involves continuing consultation with Indian people and others to ensure that an opportunity is provided for their views to be expressed and considered. In addition, the Directorate assists in assessing and planning requirements through research and surveys and an analysis and evaluation of programs.

The Policy and Planning Directorate was officially constituted during the year. Its aims are to define objectives and goals, promote co-operation of all government departments and public and private agencies whose work relates to the Indian people, the development of legislation and the effectiveness of policies and programs as they apply to Indians. It is also concerned with ensuring the active participation of Indians in determining their own future.

During the period under review, Part I of "A Survey of the Contemporary Indians of Canada", which was prepared for the Indian Affairs Branch by a research team under the direction of Dr. H. B. Hawthorn of the University of British Columbia and Dr. Marc-Adélar Tremblay of Laval University, was submitted to the department and given wide distribution. Part I is concerned with an analysis and findings on those conditions that are primarily economic, political and administrative. Part II, to follow next year, will cover the education of Indians and the internal organization of reserves.

Administration Directorate

The responsibility and authority for the administration of Indian lands, estates and band membership and for the provision of a secretariat, support services, and an information unit, rest with the Administration Directorate.

LANDS, MEMBERSHIP AND ESTATES

Estates

Under jurisdiction conferred on the Branch by the Indian Act, estates of deceased or mentally incompetent Indian persons are administered by the Administrator of Estates. During the year, the section administered and concluded 817 estates. Over the same period, 760 new estates were opened for administration. The Branch also managed the estates of 697 mentally incompetent Indians and the assets of more than 388 infant Indians.

A total of 2,545 vouchers were processed in receipt of \$339,016.41 for credit of estates and in disbursement of \$266,095.35 in payment of debts and distribution to heirs. A balance of \$804,339.74 remains under administration on behalf of infants, mentally deficient adults and in the estates of deceased Indians.

Police and other reports of fatal accidents were reviewed in 136 cases and, where third party liability was involved, appropriate action taken.

Actions for damages for the benefit of dependents have been successful in some cases and awards totalling \$88,020 have been reported.

Membership

The 1951 Indian Act established provisions for determining those who were entitled to be registered as Indians; provided for the immediate establishment of lists and a period of time in which there could be adjustments following protests from Indians as to inclusions or omissions; and, provided that following such period an Indian Register was to be maintained in which would be recorded the names of all persons entitled to be called Indians under the Indian Act. Lists of all bands were compiled and published in 1951, and although the additions of those persons who can trace entitlement back many years is a continuing process the basic list is becoming more firmly fixed with each passing year.

There were 658 persons enfranchised during the fiscal year. Of these, 53 were enfranchised as a result of applications in accordance with Section 108(1) of the Indian Act. The remaining 605 enfranchisements resulted from the marriage of Indian women to non-Indians in accordance with Section 108(2).

The Membership Section is responsible for dealing with the various provincial welfare agencies, with the parents, and others, concerning the registration and administration of funds belonging to adopted Indian children. There were 179 registered adoptions of Indian children. Non-Indian parents adopted 93 children while the other 86 children were adopted by Indian people.

In accordance with the provisions of Sections 9 and 12 of the Indian Act, the addition of 13 persons to membership in Indian bands was protested during the fiscal year ending March 31, 1967. Decisions were reached on four of these protests; two people were declared entitled and two not entitled to be registered as Indians.

This unit deals with the amalgamation and division of bands and the formation of new bands under Section 17 of the Indian Act. Reorganization is based on evaluation of the economic, social, and political implications. Although a number of possible changes in band structure were considered, no actual amalgamation or division of bands took place during the fiscal year.

The Membership Section became responsible for the collection and production of Indian population statistics on October 17, 1966. The information contained in the Registered Indian Record has now been transferred from data processing cards to tape for computer application. Under this new system, statistical information concerning the Indian population will be more readily accessible.

Surveys and Titles

The Land Surveys and Titles Section provides administrative, legal, and technical assistance to Indians in the administration of an effective system of land tenure based on provincial practices.

A major function of the Land Surveys and Titles Section is the operation of the Indian Land Registry in which are recorded details of all transactions affecting the status of and title to some 2,300 Indian reserves and settlements throughout Canada.

Individual Indians acquiring interest in reserve lands are issued with Certificates of Possession or Notices of Entitlement as evidence of their right of possession. A total of 1,006 Certificates of Possession and Notices of Entitlement were issued during the year.

There are three types of land registers maintained: a General Register in which are recorded the details of all general transactions affecting Indian reserves; a Reserve Land Register which contains details of original allotments to band members as well as transfers, sales and other transactions between individual Indians; and a Surrendered Lands Register which contains information relating to the disposal of surrendered Indian lands.

In co-operation with the Surveyor General of Canada Lands, the section administers a program of boundary and internal subdivision surveys. These land surveys assure the effective administration of Indian lands. They apply particularly in matters relating to individual holdings, estates, leases, easements, sales and other types of alienations which require accurate plans and descriptions. During the year, 56 boundary and subdivision surveys were completed and an additional nine surveys were partially completed.

The compilation and amendment of the Schedule of Indian Reserves and Settlements is also the responsibility of the Land Surveys and Titles Section. Part I of this Schedule, which lists the Indian Reserves and Settlements for the whole of Canada (with the exception of British Columbia), was revised to January 31, 1964. Part II, which deals exclusively with British Columbia, has been revised to April 30, 1966.

Reserve Lands

Approved during the year were 2,005 new leases, permits, and renewals of leases authorizing the use and occupation of Indian reserve lands by non-Indians. There are over 9,000 leases and permits in effect on Indian reserves. These produced \$2,517,000 in revenue for the benefit of Indians.

A large number of applications continue to be received from provincial departments of highways and hydro electric power authorities, for roads, power lines within reserves, for opening up new areas to resources, and for bringing main highways through Indian reserves.

Bands situated in suburban areas, such as the Musqueam Indian Reserve, Vancouver, B.C., and the Cowichan Indian Reserve at Duncan, B.C., continued to lease areas for further development. On the Musqueam Reserve,

an area is being subdivided for residential purposes. On the Cowichan Reserve, Canada Safeway Limited has negotiated a long term lease to expand its shopping centre facilities. It was noted during the past year that there was a pronounced increase in applications for leases, permits, rights-of-way, and easements. This created a need for increased experienced staff to maintain the steady flow of land transactions.

SUPPORT SERVICES

Trusts and Annuities

Indian Band funds held by the Government of Canada on behalf of 520 Indian Bands totalled \$31,147,717.70 as of March 31, 1967. Of this amount, \$25,932,217.03 was in Capital funds and \$5,215,500.67 in Revenue funds. Expenditures totalled \$9,454,790.82 as compared to \$8,112,628 in the previous year, and income totalled \$10,465,732.56 as compared to \$8,901,299.

Some of the major items of expenditures during the 1966-67 fiscal year were: Housing \$1,243,019.43; Distributions \$1,175,176.19; Agriculture \$674,507.27; Band owned buildings \$458,598.08; Social Services \$322,421.70 and Roads, Bridges and Sidewalks \$319,478.98.

Band Loans

Applications for loans, other than housing, were received from 47 Indians. Of these, 36 received loans totalling \$35,475. The average loan was for \$985.42. The purpose of the loans and amounts are as follows:

Purpose	Amount
Farm Machinery and Equipment	\$ 9,960.00
Cattle	16,900.00
Horses, Harness and Saddles	2,225.00
Vehicles & Vehicle Repairs	3,595.00
Furniture	1,150.00
Sheep	1,100.00
Miscellaneous	545.00

A total of 33 band loans, aggregating \$22,351.70, were fully retired during the year.

Personal Savings

At March 31, 1967, there was \$368,815.33 on deposit in Indian savings comprised of 1461 general savings accounts.

Annuities

Annuities totalling \$587,862 were distributed to 112,132 Indians in accordance with the various treaties. This includes payments on account of enfranchisements, commutations, and arrears. The Government of Ontario refunded \$37,425 which was paid under Treaty 9.

During the year, the Governor in Council issued 43 Orders, pursuant to the provisions of Section 68(1) of the Indian Act, permitting extensions to existing authorities and granting permission to bands not previously under Section 68(1), to manage their revenue funds.

A total of 137 bands now operate under this Section and administer different schemes in accordance with conditions set out in the Orders.

INFORMATION SERVICE

The need to promote understanding and appreciation of the Indian people of Canada has always been recognized by the Branch. This has been increasingly apparent since the two groups, Indian and non-Indian, have become more closely associated. It is particularly gratifying to note the increased demand for information on the Canadian Indian. The volume of enquiries from all sources has been subjected to an unprecedented upsurge.

During the year, 15,000 requests were answered by the newly formed Information Service. In addition, a number of publications were revised and will be published during the coming year. These publications will now be available through the Canadian Government Bookstores throughout the country.

The Indian News, a newspaper directed to the Indian people and reporting events of national Indian interest, is now published every two months rather than quarterly as in the past. In addition, some work was done to establish a revised mailing list as well as a new system of distribution so that the paper will reach every Indian home on a monthly basis by January of 1968.

Federal-Provincial Relations and Indian Consultation

Detailed discussions were held with individual provinces regarding the extension of provincial services to the Indian people. Agreements were signed with the Province of Ontario, for the extension of provincial welfare services to Indians; with Ontario and Alberta, for the extension of community development programs and with Manitoba on a master agreement for the education of Indian children. The Saskatchewan Fur Conservation Agreement, which had expired on March 31, 1966, was renewed for a one-year period. This was to allow additional time for examining prospects and considering proposals for possible inclusion under the agreement of other resources. A Forest Fire Protection Agreement was signed with the Provinces of Saskatchewan and New Brunswick, for the prevention and control of forest fires on reserves. The Province of Alberta agreed to a jointly-financed project to develop craft industries and provide marketing services for registered Indians and people of Indian ancestry.

The Federal-Provincial Co-ordinating Committees in Quebec, Ontario, Manitoba, Saskatchewan, Alberta and British Columbia, which are com-

prised of provincial and federal representatives, continued to develop their co-ordinating roles. A total of some fifteen meetings were held. Their function is to promote a better understanding of the respective objectives, policies and programs of the federal and provincial governments in relation to Indians and to co-ordinate federal and provincial activities.

Personnel Division

The Branch Personnel Division continued to render advice and guidance in the area of personnel administration to all levels of management. Its role is to inform, advise and implement departmental personnel policy in the Branch. It continued to provide liaison between the Branch and those personnel functions which are administered at the departmental level.

With the physical amalgamation of the Branch as part of the Department of Indian Affairs and Northern Development, regional personnel offices were established during the year and each Regional Director now has a trained personnel administrator on his staff.

Two hundred and twenty-one new positions were established as a result of the expansion of Branch activities. Where possible, these positions were filled internally and the Branch conducted 46 promotional competitions. However, a considerable number of positions are in fields where there are marked shortages of qualified candidates and, as a result, the number of positions unfilled at year-end was higher than normal.

Classification revision action continued throughout the year. In a number of instances individual employees, and in others the Branch, requested formal review of the new classifications assigned. This process was underway at year end. Every effort was made to place incumbents of positions which were "red circled" in jobs which provided greater opportunity for personal growth and advancement.

The organizational changes, referred to above, reflected on the development and training activities and led to the appointment of a Branch Training Officer during the year. In liaison with the Departmental Training Section, the Branch conducted a four-month course for the hostesses who staff the Indians of Canada Pavilion at EXPO '67. This was a three-phase program based on language training, personality development and Indian culture. Branch staff were involved in a number of courses and programs ranging from Letter and Report Writing to Educational Leadership.

The Personnel Division became involved, in a co-ordinative role, with the Departmental Employee Evaluation Program as well as the preparation of data for such undertakings as the departmental personnel records system and the Five-Year Budgetary Review.

Names and Locations of Regional Offices and Indian Agencies

<i>Name</i>	<i>Location</i>	<i>Name</i>	<i>Location</i>
MARITIMES	Amherst, N.S.		
Miramichi	Chatham, N.B.	St. John River	Woodstock, N.S.
Eskasoni	Eskasoni, N.S.	Shubenacadie	Micmac, N.S.
P.E.I.	Lennox Island, P.E.I.		
QUEBEC	Québec City		
Abitibi	Amos		
Bersimis	Betsiamites		
Caughnawaga	Caughnawaga	Pointe-Bleue	Pointe-Bleue
Maniwaki	Maniwaki	Restigouche	Restigouche
Odanak-Lorette	Village des Hurons	Seven Islands	Sept-Îles
Oka	Oka	Timiskaming	Notre-Dame-du- Nord
ONTARIO	Toronto		
Caradoc	London	St. Clair	Sarnia
Christian Island	Cedar Point P.O.	Bruce	Southampton
Simcoe	Sutton West	Six Nations	Brantford
Peterborough	Peterborough	St. Regis	Cornwall
Chapleau	Chapleau	Tyendinaga	Deseronto
Fort Frances	Fort Frances	Parry Sound	Parry Sound
James Bay	Moose Factory	Nakina	Geraldton
Kenora	Kenora	Nipissing	North Bay
Manitoulin	Manitowaning	Port Arthur	Fort William
		Sault Ste. Marie	Sault Ste. Marie
		Sioux Lookout	Sioux Lookout
		Sudbury District	Sudbury
MANITOBA	Winnipeg		
Clandeboyne	Selkirk		
Dauphin	Dauphin	Norway House	Norway House
Fisher River	Hodgson	Portage-la-Prairie	Portage-la-Prairie
Island Lake	Island Lake	The Pas	The Pas
SASKATCHEWAN	Regina		
Battleford	Battleford	File Hills-	Fort Qu'Appelle
Carlton	Prince Albert	Qu'Appelle	
Crooked Lake	Broadview	Meadow Lake	Meadow Lake
Duck Lake	Duck Lake	Pelly	Kamsack
		Shellbrook	Shellbrook
		Touchwood	Punnichy
ALBERTA	Edmonton		
Blackfoot	Gleichen		
Blood/Peigan	Lethbridge		
Edmonton/Hob-	Edmonton	Lesser Slave Lake	High Prairie
bema		Saddle Lake/-	St. Paul
Fort Vermilion	Fort Vermilion	Athabaska	
		Stoney/Sarcee	Calgary
DISTRICT OF MACKENZIE	Fort Smith, N.W.T.		
BRITISH COLUMBIA	Vancouver		
Babine	Hazleton		
Bella Coola	Bella Coola	Nicola	Merritt
Burns Lake	Burns Lake	Skeena River	Prince Rupert
Cowichan	Duncan	Stuart Lake	Prince George
Fort St. John	Fort St. John	Terrace	Terrace
Kamloops	Kamloops	Fraser	Vancouver
Kootenay-		West Coast	Port Alberni
Okanagan	Vernon	Williams Lake	Williams Lake
Kwawkwalth	Alert Bay		
Lytton	Lytton		
YUKON			
Yukon	Whitehorse, Y.T.		

NATIONAL PARKS



Moose in Waterfowl Lake. Mount Chephren is in the background. This picturesque scene is along the route of the Banff-Jasper Highway.

The National Parks

Centennial Year seems the appropriate time to measure the progress we have made in the past one hundred years, and how far we have yet to go before claiming a truly representative chain of National Parks from sea to sea. There were no National Parks in 1867. Not until eighteen years later, in 1885, was our predecessors in the Department of the Interior established—with what prescience is fully apparent today. About that time steps were taken to reserve the area around the hot springs, discovered in what is now Banff National Park. In 1967 we had nineteen National Parks, ranging from the flowering uplands of Mount Revelstoke in the Selkirks to the Atlantic shores of Terra Nova; from the northern meadows of Wood Buffalo to the bird-haunted marshes of Point Pelee at the southernmost tip of Canada.

It is a cliché that, to the world at large, Canada enjoys the reputation of being the land of wide-open spaces and last frontiers. Where this is still true, we are fortunate. Yet we cannot encourage the illusion that we need never worry about overcrowding, or of finding a spot where we can “get away from it all.” Every summer the traveller finds more communities, more industries in the midst of what once seemed a vast wilderness. Which are, of course, welcome manifestations of our country’s economic growth.

But they are also warnings that we must act *now* if we are to develop a comprehensive National Parks System for Canada, adequate for the present and future.

The key is proper planning; planning not only for new parks, but for the optimum development of those we already have. To this end, some major changes were made in the organization of the National and Historic Parks Branch. The National Parks Service is now a two-fold entity, reflecting its double role—planning and operations. At the same time, the decentralization of park administration to the field—a process which developed gradually over several years—was completed in the fall of 1966. Regional offices are now fully operational at Calgary (Western Region, comprising British Columbia, Alberta, Saskatchewan, Manitoba and the Territories), Cornwall (Central Region, made up of Ontario and Quebec), and Halifax (Atlantic Region, composed of Nova Scotia, New Brunswick, Prince Edward Island and Newfoundland).

During 1966-67, close co-operation existed between the department and a number of provincial governments in examining the potential of areas, possibly valuable additions to the National Parks System. In the Maritimes, the studies naturally concentrated on shorelines: the Gros Morne area in

Newfoundland, East Point in Prince Edward Island, the Strait of Northumberland in New Brunswick and the Atlantic coast of Nova Scotia. In the Prairie Provinces, reconnaissance studies were made of Manitoba's Canadian Shield country, the grasslands of southern Saskatchewan and the Red Deer Valley of Alberta. There is every reason to hope that these studies will produce permanent enrichment of our National Parks heritage.

Close liaison was maintained also with United States government authorities—especially with officers of the Department of the Interior—on matters of mutual interest. Officers of the Parks Branch presented material and represented the department at a number of national and international conferences dealing with parks and outdoor recreation resources, including the Federal-Provincial Parks Conference in 1966.

For the first time, members of the American National Parks Service attended in our mountain rescue school for Park Wardens. This highly-specialized school on the mountains and glaciers in the Lake Louise-Yoho area is rapidly gaining recognition throughout North America as one of the finest of its kind.

As pointed out, careful advance planning and research are essential to efficient establishment and maintenance of a National Parks System. As part of the pre-planning pattern, a consultant was engaged to design a series of studies which enabled the Branch to measure the demand for outdoor recreation in Canada and to assess the role of the National Parks in the light of this demand. Other research activities involved studies of visitor use and characteristics at Jasper, Waterton Lakes and St. Lawrence Islands National Parks and at Fort Wellington National Historic Park.

The basic pattern of overall planning for each park in the system must be set as soon as possible. Major activity centered, therefore, on resource and field studies, in preparation for the production of provisional master plans for all the National Parks by December 1967. Provisional master plans were completed for Fundy National Park and the National Park being established in the Kejimikujik area of Nova Scotia. Field studies and preliminary work were carried out at Terra Nova, Prince Edward Island, St. Lawrence Islands, Georgian Bay Islands, Prince Albert and Waterton Lakes National Parks. Banff, Jasper, Yoho and Kootenay National Parks are being studied as a complex, making up one vast unit for planning purposes.

Winter recreation planning was also included. Consultants were retained to recommend a long-range development plan for the best utilization of the Marmot Basin skiing area in Jasper National Park.

With the ever-increasing requests by the public for services in the National Park townsites, the town and regional planning program has as its objective the preparation of long-range development plans for each of the five existing park townsites. New visitor service centres, which will be developed at selected points along high-standard trunk highways throughout the parks, are also planned. Each of these comprehensive plans is to be followed

by zoning regulations and other controls intended to ensure the most efficient use of land for the enjoyment of the visiting public.

Under an Order-in-Council dated December 1, 1966, a new Land Use Code was enacted for Banff Townsite. The code is designed to produce a more orderly and systematic development of the townsite, in keeping with long-range plans. Similar up-to-date zoning regulations are to follow for Jasper and Waterton Lakes townsites. Having completed the preliminary long-range plans for the townsites of Banff, Jasper and Waskesiu (in Prince Albert National Park), the Branch is now involved in preparing similar plans for two smaller townsites, Waterton in Waterton Lakes National Park and Wasagamung in Riding Mountain National Park.

The pressure and demands placed on the National Park lands have during the past few years stressed the need for re-defining the National Parks leasing system. The present leasehold policy is a consolidation and modification of the policy first introduced under a previous administration, and developed to provide that full control of lands within the National Parks remains with the people of Canada as a whole, as represented by the federal government. This policy has gained wide support among the general public, but some concern was voiced by leaseholders who were directly affected. The members of the Standing Parliamentary Committee on Northern Affairs and National Resources travelled to Banff and Jasper to receive briefs from interested persons. Subsequently they conducted hearings in Ottawa, and in its final report, the Committee endorsed the department's leasehold policy.

Dramatic evidence of the pressures on our National Parks is provided by the visitor attendance figures. In 1965-66, the parks were visited by 9,845,283 people. In the past year, that figure rose to a record 11,367,912—an increase of more than $1\frac{1}{2}$ million, or 15.46 per cent. Banff National Park continued to lead the parade with over two million visitors—200,000 more than in 1965-66. Such startling statistics leave no doubt that farsighted preservation measures are essential if the travellers of 2067 are to find the same pleasure in visiting the National Parks.

The increase in campers was also substantial, continuing the recent trend toward family holidays by car and tent or trailer. The 1966 season's total in camper days was 2,510,437 as compared with 2,189,006 in 1965—an increase of 14.68 per cent. One hundred thirty-two trailer sites and 861 campsites were constructed in 1966-67, and it is estimated that an additional 1,800 sites per year for the next five years must be provided in order to meet the demand.

National Parks campgrounds are designed with two objectives in mind; providing the camper with the particular kind of natural setting and campground facilities most suited to his needs, and maintaining the ecological balance of the park environment. To meet these requirements, two types of campground are now being developed in the National Parks—fully serviced and semi-serviced. It is recognized that there will be a continuing need for

fully-serviced campgrounds, and these will be maintained for the visitor who wants the modern conveniences and easy access to the more obvious park attractions. However, the majority of future campground designs will be: firstly, of the "semi-serviced" type. Past experience has shown that such campgrounds meet the demands and needs of most campers and trailer-ites. Facilities such as firewood, water supply, sewage and garbage disposal are available, as well as car parking and tent space, tables and fireplaces. These campgrounds are designed for those visitors who enjoy family camping close to park recreational attractions such as swimming, fishing and boating; secondly, the primitive type campsite is designed for perhaps the most fortunate visitors of all—those who are able and prefer to camp in the less-accessible wilderness, take their pleasure from the purely natural attractions of the park, and do not need much in the way of amenities. In these campsites, only minimum facilities are provided. The sites are normally accessible on foot only, by boat, or on horseback, and are maintained in their natural state for the benefit of the more hardy camper.

Increase use and activity within the parks occasions a definite bearing on one aspect of operations—road maintenance, particularly in the mountain parks where winter snow conditions are extremely severe, and where it is essential that major trunk and arterial highways be negotiable at all times. This involves the maintenance of 114.9 miles of Trans-Canada Highway from Revelstoke to Banff, where snowfalls of 300 to 500 inches occur during the winter in the Rogers Pass and Kicking Horse Pass areas. In addition, there are 320.2 miles of arterial highways and over 200 miles of secondary roads to maintain.

The trunk highways program was continued in 1966, with construction work on the Yellowhead Route through Jasper National Park one of the major projects. A long-term road requirement study was initiated, to supplement and eventually replace the existing trunk highways program.

Among the main engineering projects carried out during 1966-67 were continued development of the Lower Lake Louise Visitor Service Centre and a new industrial area in Banff, also continuation of the townsite improvement program at Jasper and an addition to the hot springs pool facilities in Kootenay National Park.

In keeping with the National Parks policy and the basic purpose of the National Parks System, park interpretation was continued and expanded during the 1966 season. This endeavour, through the media of conducted trips, illustrated lectures, labelled trails and exhibits, provides the means by which the visitor may better see, understand and appreciate the typical examples of Canada's wild landscapes in the National Parks. The interpretative programs encourage in the visitor an awareness of the significance of National Parks in Canada, in North America and in the world.

A regional parks naturalist was appointed in the Atlantic Region. In addition, fifteen seasonal park naturalist positions were established in nine National Parks.

During the 1966 season, interpretative programs were presented in twelve National Parks. The number of visitor contacts through the program activities totalled 489,146—an increase of 28 per cent over that of 1965 in ten National Parks.

The first major Nature Interpretation Centre in any National Park in Canada was officially opened on August 19, 1966 in Point Pelee National Park. Here, through many exhibits, the visitor gains an introduction to the Park and its geology, topography, climate, vegetation, wildlife and human history. The Centre remained open on a daily basis until October 1, after which it was open only on week-ends. As of March 31, 1967, the number of visitors totalled 26,054 for the 98 days it was open.

The renovation of an existing museum in Prince Albert National Park was planned with an entirely new interior design and displays. This will be opened early in the summer of 1967.

National Parks contain areas of great scientific interest. Consequently, there is a demand for the issue of permits to collect geological, botanical and zoological specimens. Although such endeavours add to the knowledge of each park, care is taken by careful examination to ensure that each request is sponsored by a recognized institution for scientific purposes. During the year 1966-67, 116 collecting permits were issued to individuals sponsored by thirty different agencies, to collect in fifteen of the National Parks.

With the commencement of Centennial Year, special interest centered around the buffalo herds in Wood Buffalo and Elk Island National Parks. These survivors of the great herds which roamed the plains in Canada's early days, have been managed by the department since 1897. A limited quantity of buffalo meat was produced as a result of the herd management control program at Wood Buffalo Park in the winter of 1966-67. Normally, the meat produced by these programs is offered by tender to a number of packing houses. However, because of the interest generated across the country in buffalo meat as an appropriate food for centennial celebrations, a number of unusual arrangements were made to enable as wide a distribution as possible. Of the very limited supply available, approximately two-thirds were provided to Canadian specialty food caterers at EXPO '67 in Montreal, in the hope that at such a national focal point the greatest possible number of Canadians would have a chance to taste it. The remaining one-third was distributed on a first-come-first-served basis to groups and organizations planning special centennial functions of a non-commercial nature.

The popularity of buffalo meat in Canada and the agreement of various provincial governments to establish commercial sources led to a decision to

make small herds available for buffalo ranching purposes. Public bids are to be called in 1967 for the purchase by one Canadian buyer of a herd unit of twenty to twenty-five prime buffalo from Elk Island National Park. If sufficient interest is shown in buffalo ranching on a commercial scale, other herd units may be put on sale in the future from Elk Island's surplus stock. There is also a possibility that some Indian bands may take up buffalo ranching in addition to cattle ranching.

HISTORIC SITES



Replica of Jacques Cartier's ship, the "Grande Hermine." The ship will be the focal point of Cartier-Brébeuf National Historic Park in Quebec City.

Historic Sites

On the organizational side, new impetus was added to the activities of the Branch with the appointment in January 1967, of an Assistant Director, Historic Sites.

One spectacular highlight of last year's activities within the historical program was the construction of a replica of Jacques Cartier's ship, the "Grande Hermine". Research was undertaken, under contract, by Montreal's famed École Polytechnique, and actual construction carried out by the skilled craftsmen of the old shipbuilding firm of Davie Bros. Ltd. in Lévis, P.Q. The vessel, a three-masted workhorse of her day (1535), is destined to be the focal point of Cartier-Brébeuf National Historic Park in Quebec City. However, her first tour of duty is at EXPO '67 where she is one of La Ronde's major attractions.

Elsewhere in Canada, in Whitehorse, another vessel occupied the Branch's attention. The "SS Klondike" was moved overland, a distance of 4,500 feet, to a location selected as a national Historic Site commemorating Northern Transportation. Restoration will begin in 1967-1968.

Reconstruction and restoration of buildings was a field of activity well tended during the fiscal year 1966-1967. At the Fortress of Louisbourg, the Chateau St. Louis became a reality and once more the skyline of a bygone era is a proud part of the Cape Breton coast. Still in the Maritimes, St. Andrews' Blockhouse in New Brunswick was restored and the battery re-established. Historic Kingston, Ontario, is richer with the painstaking restoration and refurnishing of "Bellevue" of Sir John A. Macdonald fame, and the house will be officially opened on May 24, 1967. Also, in Manitoba, a major restoration project began on Lower Fort Garry's Big House. Minor restoration work took place at Fort Rodd Hill, Esquimalt, B.C.

Responsibility for preserving all elements of Canada's historic heritage led to such varied activities as the salvaging of McNabb's Island ordnance in Halifax harbour; stabilization and repair of military works at York Redoubt (also at Halifax); stabilization of archaeological excavations and establishment of ground interpretation patterns at Côteau-du-Lac National Historic Site in Quebec Province; and rerouting of Mavis Street which had, since the establishment of Fort Langley National Historic Park, bisected in arch-anachronistic fashion this historic west coast post of the Hudson's Bay Company.

It was a heavy year for archaeological field investigation. Major staff projects were conducted at Fort Beauséjour, N.B. (early structures inside the

Fort proper); Coteau-du-Lac, P.Q. (primarily the Canal); and Nootka, B.C. (Spanish and Indian settlement). Other staff investigations took place at Fort Malden (Ontario); Port Dover (Ontario); Fort Gaspereau (N.B.) and St. Andrews by the Sea (N.B.) This program was supplemented by contract projects at Rocky Mountain House by the University of Alberta, at Lower Fort Garry by the University of Manitoba, at the Rainy River Mounds and Cahaique in Ontario by the University of Toronto, and at Fort Lennox and Signal Hill by independent archaeologists assisted by university students. In addition, a modest underwater program was conducted primarily in the St. Lawrence-Lake Ontario region and consisted chiefly of general reconnaissance.

Among the topics dealt with in more than thirty reports prepared during the year by the Historical Research Section are the History of the International Fishery at Canso, N.S., in the 18th century; the Historical Assets of the Rideau Waterway; a History of Early Building in Dawson City; a Structural and Occupancy History of the Big House at Lower Fort Garry, Man; a Narrative and Structural History of Fort Beauséjour, N.B.; a Narrative History of the Town of St. Andrews, New Brunswick; a Survey History of the Great Lakes Area to 1900, and a biography of Captain William Twiss of the Royal Engineers, who, it will be recalled was in charge of building the canal at Côteau-du-Lac in the 18th century. these reports enabled elaboration on development and interpretation plans and publications, and also served as background papers for the Historic Sites and Monuments Board of Canada.

The Historic Sites and Monuments Board met in Ottawa on May 25-26, 1966, and in Winnipeg on October 26-28. As a result of their recommendations the Minister declared the following structures to be of national historic importance.

The Matheson House in Perth, Ontario, was built in 1840 by Roderick Matheson, a staunch supporter of Confederation who became one of the original senators of the Dominion in 1867. Situated on the main shopping street of Perth, the house is characteristic of the distinctive Scottish-Canadian type of architecture prevalent in the first half of the nineteenth century. An agreement, entered into by the Branch and the Town of Perth, provides for assistance from the Branch in the purchase of this historic house and also in the restoration, now in progress.

The John McCrae House in Guelph, Ontario, was the birthplace of Colonel John McCrae, doctor, soldier and poet. He is best known for his poem "In Flanders Fields", composed during the second battle of Ypres in the spring of 1915. An agreement with the Lieutenant-Colonel John McCrae Birthplace Society, for the restoration of this house has been arranged. The site is representative of the period of the 1850's and 1860's.

The Point Clark Lighthouse, built in 1859, is approximately two miles from the Kincardine-Goderich Highway, on Lake Huron. This site has a long

history, bridging part of the period of Union before Confederation. Both the lighthouse itself and the lightkeeper's quarters are rugged structures, giving an appearance of solidity capable of withstanding the buffeting of Lake Huron's storms, while the lighthouse lantern commands a magnificent view of the surrounding area and the lakeshore to north and south.

The Motherwell Homestead at Abernethy, Saskatchewan, was the home of the Honourable William Richard Motherwell, who was born in Perth, Ontario in 1860 and died at Abernethy in 1943. A pioneer farmer, Motherwell was chosen to be Minister of Agriculture for the new province of Saskatchewan in 1905, later became federal Minister of Agriculture in the 'twenties, and finally a private member of the House of Commons from 1930-1940. His farm was called Lanark Place for his native county in Ontario, and it was in the living room of the present house that notices were drawn up for what proved to be the founding meeting of the Territorial Grain Growers' Association in 1901.

The "Dominion Telegraph" in Humboldt, Saskatchewan—When the Government of Canada decided, in the early 1870's, to construct a Canadian Pacific Railway to unite the provinces of the new Dominion, the first step was to build a pioneer telegraph line from the Great Lakes to British Columbia. The telegraph was also used to keep in touch with the force policing what was then the Northwest Territories, and proved invaluable during the rebellion of 1885. The western section of the telegraph line from Swan River via Humboldt to Edmonton was completed in 1876, and the Humboldt office and repair station was established in 1878.

Fort Howe, New Brunswick, was erected in 1777 to protect settlers and traders at the mouth of the Saint John River, following numerous rebel raids which forced them to vacate the area and move inland. After Fort Howe was built and garrisoned under the command of Major Gilfred Studholme, there were no further raids and it was safe for the settlers to return. A treaty was signed in 1778 at Fort Howe which kept the Indians in the area loyal to the Crown during the American Revolutionary War. After the War, Major Studholme, as Crown agent, gave his support to the Loyalists in their efforts to become established in Saint John.

Sir Samuel Leonard Tilley's House at Gagetown, New Brunswick—One of the Fathers of Confederation, Sir Samuel Tilley was also Minister of Customs and Minister of Finance in the Dominion Government and twice Lieutenant-Governor of New Brunswick. The house in Gagetown where he was born in 1818 was built shortly after the Loyalist immigration into the province. An agreement for its restoration has been entered into by the Branch with the province, and the building will become a museum for the display of local furniture, implements and architectural features connected with the history of Queen's County.

"Ardgowan", in Charlottetown, Prince Edward Island, was originally owned and occupied by one of the Fathers of Confederation, William Henry

Pope, from the 1850's until 1873. His son Joseph (later Sir Joseph Pope), who was born at Ardgowan, became secretary to Sir John A. Macdonald and contributed to the creation of the Department of External Affairs. Ardgowan is an addition to the Branch's program to commemorate Fathers of Confederation.

Based on the recommendations of the Historic Sites and Monuments Board, and with the approval of the Minister, the Branch entered into five different agreements to assist in the restoration of old buildings. Besides the Matheson House, McCrae, and Tilley House already mentioned, agreements were reached with the Emily Carr Foundation to restore the Emily Carr House in Victoria, and with the Province of British Columbia for the restoration of the house known as "Craigflower Manor", also in Victoria.

During the year, the Minister designated four "Eminent Canadians", John S. Ewart, Calixa Lavallée, Mary Irene Parlby and James Shotwell.

John Skirving Ewart is remembered both for his activities as a lawyer and for his campaign in writing and in speeches for complete Canadian independence from Britain. He was born in Toronto in 1849, and was called to the Bar in 1871, serving for a short time in Sir John A. Macdonald's law office in Kingston. Many of the things Ewart advocated, such as a Canadian governor-general and the abolition of appeals to the Judicial Committee of the Privy Council, have since been realized. He died in Ottawa in 1933.

Calixa Lavallée was born in 1842 near Verchères in "Lower Canada". He is remembered chiefly as the composer of "O Canada" which he wrote in 1880; he was also the first French-Canadian musician to achieve a reputation outside the nation. He spent much of his life in the United States, and eventually settled in Boston, where he died of tuberculosis in 1891. In 1933 his remains were ceremonially transferred to the Côtes des Neiges cemetery in Montreal.

Mary Irene Parlby, who died in 1965 at Alix, Alberta, at the age of 97, was a member of the distinguished "Group of Five" who led the movement which in 1929 established the legal status of women as persons eligible for appointment to the Senate of Canada. Mrs. Parlby also worked earnestly in the movement to organize Alberta's farmers in the early part of the century and served as president of the women's branch of the United Farmers of Alberta. Elected to the Alberta legislature in 1921, she was the first woman in Alberta and the second in the British Empire to hold cabinet rank in government. The University of Alberta conferred the honorary degree of Doctor of Laws on Mrs. Parlby in 1935.

James Thompson Shotwell, historian, teacher and statesman, was born at Strathroy, Ontario in 1874. He is best known for his work in international affairs. He was a professor at Columbia University from 1905 to 1942, worked on several large encyclopaedias and concerned himself with the subjects of war and peace. He was particularly interested in Canadian-

American relations as, in his own words, "the best possible example of how nations can learn to live together without war." Shotwell died in New York in 1965.

Also on the advice of the Historic Sites and Monuments Board, the Minister announced a program under which the Branch will assume responsibility for the graves of all the Fathers of Confederation—a program which, appropriately enough, will commence in Centennial Year.

WILDLIFE



Canadian wildlife scene in one of the National Parks.

Wildlife

Canadians are fortunate in their natural resources of wilderness and wildlife. Paradoxically, a shorter working week and a higher standard of living have brought increasing recreation demands on wildlife at a time when urbanization, mechanization, and pollution are reducing wildlife habitat. Preservation of wildlife for the enjoyment of future Canadians requires management based on research and supported by informed public opinion. The Canadian Wildlife Service is responsible for migratory birds and for wildlife within the Northwest Territories, the Yukon Territory, and the National Parks.

On April 6, 1966, the Minister tabled the National Wildlife Policy and Program in the House of Commons. The new program provides for co-operative research and management with the provinces on common problems and establishes guidelines and goals for federal research programs. The Minister also announced that the Canadian Wildlife Service had been established as a separate Branch of the Department in recognition of the importance of the wildlife resource.

The Service is participating with the provinces in a major program of preserving wetlands by purchase and long-term lease. Fifty per cent of North America's ducks nest and raise their young in the southern Prairie Provinces and parts of adjacent states. Seventy to eighty per cent of the species preferred by hunters—mallard, pintail, canvasback, and redhead—are produced in that area. Over 1,000,000 hunters in Canada and the United States depend to some extent on prairie duck production. In 1963 the Canadian Wildlife Service began a pilot program to preserve marshes, sloughs, and potholes as nesting areas for waterfowl. The objective was to find a method of compensating farmers who would agree to preserve their wetlands.

A final pilot study has been completed and in 1967 a long range program began to preserve about four million acres of wetlands at an annual cost of over five million dollars. By 1977-78, 208 rural municipalities in Manitoba, Saskatchewan, and Alberta will be included. In return for annual payments the farmer agrees not to burn, drain, fill, or otherwise destroy his wetlands for ten years. The agreement may be terminated on 60 days notice by either party.

Additional sums will be spent annually to acquire by long-term lease or purchase wetlands for nesting and over-wintering in other provinces of Canada. Areas around Sand Pond and John Lusby Marsh in Nova Scotia

and Last Mountain Lake, Saskatchewan, have been purchased. Further purchases will be made.

Work is under way on methods to improve remaining nesting grounds. These include control of water levels, alternation of natural plant cover, and creation of nesting and resting sites where it is economically feasible. Studies are being made to determine the foods needed by ducks, particularly young ones.

Ducks sometimes cause serious damage to grain crops. Provincial and federal crop damage insurance schemes are available, and wildlife officials work closely with landowners to inform them of up-to-date methods of crop protection. An effective way of preventing crop damage is the use of acetylene exploders and provision of alternate or "lure" crops.

Given adequate habitat, the regulation of game bird kill is the principal means of population control. An important tool for waterfowl management is the Canada migratory game bird hunting permit, issued for the first time in 1966. A total of about 385,000 permits were sold.

The permit and survey programs are being developed as a single computer system. Names and addresses of hunters derived from sales records of permits will be used in 1967 to initiate a national waterfowl harvest survey. The results of the programs, which are being developed in active co-operation with provincial wildlife agencies and hunters, are already improving the ability of wildlife officers to assess the effects of changes in bag limits, timing and length of seasons, and hunting zones.

The Canadian Wildlife Service is recruiting specialists in the theory and operation of surveys and in the theory of mathematical statistics. There is a continuing need to ensure that sound statistical procedures are employed in the collection and interpretation of numerical data not only in the field of waterfowl management but also throughout the whole spectrum of the activities of the Service.

At airports and on the airways increasing aircraft traffic has emphasized the importance of reducing bird hazards. Bird strikes have caused loss of human life. Although they have not yet caused casualties in Canada, damage to aircraft (particularly to jets) is counted in millions of dollars. A program for the management of birds in airport areas was prepared by wildlife officials and accepted by the National Research Council Associate Committee on Bird Hazards to Aircraft. The Wildlife Service directs the biological aspects of the program; the co-ordinating agency, with the Department of Transport and major airlines, is the National Research Council.

The most effective long-term solution is to make airports as unattractive as possible to problem species. Garbage dumps near major airports have been closed; trees, hedges, and shrubs cleared away; ditches cleaned, ponds drained, and low-lying lands filled, levelled, and seeded. Agricultural use of airport lands has been reduced and will be eliminated. Grass has been clipped to a calculated height: too short to provide cover for field mice or

rabbits, which in turn attract owls and hawks, too long to provide comfortable rest and feeding for small short-legged birds. Gulls, which are involved in many bird strikes, are often attracted to airfields by earthworms. Methods of reducing the number of earthworms are being tested.

Many methods have been tested in driving from airports temporary concentrations of birds which cause emergencies. Tape-recorded bird distress calls and trained falcons have been used with limited success. Exploding shotgun shells or flares have proved most useful.

One major airline had only about three-quarters as many bird strikes in Canada in 1965 and 1966 as in 1964 under the same operating conditions.

In 1965, for the first time, radar was used to observe the locations of large flights of migrating birds. Analysis and correlation with weather parameters of film records of radar observations made at 20 airports were begun. A bird hazard forecast system for use in military flying training was begun at Cold Lake National Defence Base, Alberta, on May 1, 1966, with good results. An information-gathering radar study for European-based defence forces was begun at Aix-en-Provence, France, on January 20, 1967.

Lead shot are poisonous to waterfowl when eaten. Studies of substitutes were begun. Through the co-operation of the United States Fish and Wildlife Service, nickel shot were fed to ducks and proved to be non-toxic. Other candidate materials are under review. It seems probable that the present large annual loss of waterfowl through lead poisoning can be eliminated in the future.

In 1966 a study of black brant at Anderson River, Northwest Territories, was completed. Studies of other arctic-nesting geese—Ross' goose at Perry River and small races of Canada geese at McConnell River—are continuing. On the prairies, studies were in progress on the behaviour of shoveler ducks, feeding and nutrition of ducklings, factors affecting reproductive success in waterfowl, hydrology of prairie potholes, and ecological assessment of large river deltas. Much time was devoted to rare species of birds that are few in number or in danger of extinction, notably the trumpeter swan and the whooping crane. Field studies of snipe were continued on the breeding grounds in Newfoundland and Ontario and on the wintering grounds in Louisiana.

In 1966 an additional migratory game bird sanctuary, Bylot Island, was established in the Arctic. It is the major breeding area of those greater snow geese which migrate through the Quebec City area.

The serious decline in the numbers of barren-ground caribou, revealed in surveys of 1948-49 and 1955-56, continues to cause grave concern. In 1965 the herds numbered about 250,000 animals. Excessive human kill, the destruction of winter range by forest fires, and poor calf survival during years of bad weather are the major causes of the decline. A monograph, *The Migratory Barren-Ground Caribou of Canada* by Dr. John P. Kelsall, is in press.

In April 1966 the Wildlife Service began an intensive two-year study of herds in the Keewatin District and northern Manitoba to provide data for management. The study will evaluate range conditions, collect data on human use and herd structures, and investigate certain physiological problems which bear on reproductive rates and calf survival. The study is expected to be completed in 1968.

The chief predator of caribou is the wolf, which follows caribou on their migrations. In 1966 a study of wolf-caribou relationships in the western Arctic was completed and a report will be published. A study of wolves on Baffin Island is continuing.

In 1966 studies were completed on the arctic fox in the Keewatin District of the Northwest Territories. Trapping of arctic foxes is an important source of revenue to many Eskimos, and fluctuation in numbers of these animals has economic significance. A publication will be prepared.

Studies were also completed on seedling survival in cut-over areas of timber near Hinton, Alberta; squirrel ecology in Wood Buffalo National Park; and elk in the Mountain National Parks. Owing to die-offs because of over-population in some herds, a study of the population dynamics of Rocky mountain bighorn sheep in the Mountain National Parks was begun.

Studies of fur bearers such as beaver, mink, muskrat, and polar bear continued. A study of the production of forage and its use by deer and moose in the forests of the Maritime Provinces also continued. An intensive study of the grizzly bear is under way in the remote Kluane Game Sanctuary of the Yukon Territory.

The Canadian Wildlife Service is responsible for fish in National Parks waters. Five biologists stationed in Calgary, Ottawa, and Halifax conduct research on the limnology of park waters and on the biology of game fish and related species in the National Parks.

Studies include the physical and chemical characteristics of alpine waters and the ecology of minute animal life found in these waters. Studies on primary productivity in waters of Terra Nova National Park and in the alpine lakes of the Rocky Mountain Parks have commenced.

Samples of fish have been collected and tested for pesticide residues in areas treated with DDT for mosquito control. Studies on trout eggs have established a relationship between heavy mortality of young fish and the presence of residues of DDT and its metabolites.

A temporary laboratory and a fish culture station have been installed at Lake Waskesiu, Prince Albert National Park, to carry out a long-term study on the pike and walleye populations. Eggs were collected and several million fry were stocked in Lake Waskesiu and in Clear Lake, Riding Mountain National Park.

Detailed physical and chemical studies have been continued and extended in Terra Nova National Park. A preliminary species survey was carried

out in the Bonne Bay region in western Newfoundland. Research contracts have been arranged with universities and biologists to carry out specific fishery research in the National Parks.

In co-operation with the National and Historic Parks Branch, fish culture operations at the Maligne River Trout Hatchery (Jasper National Park) have been extended, with the result that close to 1½ million trout of various species and sizes were planted in Western Parks waters during 1966.

In conformity with the National Wildlife Policy and Program, the nucleus of a research group to study the effects of diseases and parasites in wildlife has been established. Its primary objective is to establish which diseases and parasites affect Canadian wildlife and to assess their significance in wildlife *per se* or as they relate to human health. In addition to research relating to disease in wildlife, the Service's Pathology Section undertakes field investigations and the occasional examination of pathological and parasitological material collected by field personnel or others, acts in an advisory capacity to some of the department's agencies in veterinary matters, and ensures liaison with veterinary agencies at the provincial and federal levels. It also operates a unit where animal tissues collected in connection with Service study projects are prepared for histological examination.

In the summers of 1962, 1963, and 1964 anthrax caused the death of about 900 bison in Wood Buffalo National Park and adjacent Northwest Territories. A control program of vaccination of as many bison as possible and surveillance of the area was carried out in the summers of 1965 and 1966. In 1966, over 4,100 bison were vaccinated. As in 1965, no death of bison directly attributable to anthrax was recorded in 1966. In 1967, the control program will be limited to regular air patrols made over Wood Buffalo National Park and the adjacent Northwest Territories.

Two bison slaughters were held at the Hay Camp Station abattoir, Wood Buffalo National Park. Post-mortem findings and serological and histological studies continue to show that the bison population of Wood Buffalo National Park is not a healthy one in regard to brucellosis and tuberculosis. A positive program of disease control has been proposed.

The post-mortem examination of some 200 reindeer slaughtered at Ren Lake, near Inuvik, Northwest Territories, in January 1967 showed that the over-all health status of these animals was generally good. Whenever possible, further post-mortem examinations will be conducted to assess the prevalence of certain diseases that can affect humans.

The disease control program against canine distemper, infectious canine hepatitis, and rabies, initiated in 1961, was continued in 1966-67. A total of 3,330 doses of the combined canine distemper and infectious canine hepatitis vaccines was shipped to settlements in Arctic Quebec. The Health of Animals Branch, Department of Agriculture, supplied an equal number of doses of rabies vaccine. Officers of the Department's Northern Administration Branch were responsible for distribution of the vaccines and supervision of

the vaccination of the dogs. There were no outbreaks of disease in 1966-67 in the localities where dogs had been vaccinated.

Studies of parasites of wolf, wolverine, grizzly bear, beaver, and muskrat were continued. Studies of the parasites of fish at Terra Nova National Park, Newfoundland, and of gannets on Bonaventure Island, Quebec, have been initiated. Study of parasites in mergansers in the Maritime Provinces is continuing. The health status of barren-ground caribou, elk, and rocky mountain bighorn sheep is also being investigated.

The Canadian Wildlife Service provides testing services for the presence of pesticide residues in wildlife tissues. The National Registry of Pesticide Residues now contains about 6,000 entries. Laboratory work is done under contract by the Ontario Veterinary College and the Ontario Research Foundation. These records are being placed on magnetic tape to facilitate recovery of data. Computer programs will be written to retrieve from the tape record the kind and amount of information requested by the scientific community. The objective is to achieve a means of providing quickly and effectively the information which is being accumulated.

Insecticides used to control the huge and continuing sprucebudworm outbreak in New Brunswick are now subject to field and laboratory testing for effects on songbirds. The Wildlife Service influences the choice of chemicals by the forest sprayers by defining upper and lower levels of application. This program, which began in 1964, is successfully developing methods for measuring effects of pesticides on forest birds and is training Service staff, results of which are encouraging for future research.

Some Great Lakes gulls are apparently being killed by residues of the DDT family. This is being actively studied under contract, and is probably part of an emerging picture of widespread contamination of the Great Lakes by insecticide residues.

An investigation begun in 1966 of pesticide residues in falcons, eagles, and other birds of prey indicate residues of DDT and dieldrin in birds nesting as far north as the Thelon Game Sanctuary. Investigations will be expanded in 1967.

Initial surveys of prairie ducks and pheasants for residues of some common long-lived pesticides show an encouragingly low level of contamination, but further work is required to confirm this.

The Service is contracting for a study on the effects of normal field uses of the persistent pesticide endrin on reproduction of field mice in Saskatchewan. This study will be extended to include the secondary poisoning of prairie predators via endrin stored in the mice.

By September 1967 there will be two pesticide biologists actively in field work. The need for contract research will decline as staff increases. The key research need is the discovery of radically new methods of measuring the subtle effects of environmental contaminants on wild animal populations.

Participation in various interdepartmental committees on pesticides ensures co-ordination of effort. Close contact is maintained with allied research in the United States, and a program for monitoring pesticide residues in the environment is being set up internationally by discussion with some 15 countries.

An expanded information program using printed material, films, and television clips has provided close support to the Service's programs. Some 1,500 inquiries about wildlife are now answered each month. A method of teaching waterfowl identification by species clips has been developed. Improved ability to identify waterfowl under field conditions is vital to successful species management. A new series of scientific publications, *Canadian Wildlife Service Report Series*, was begun. Two reports were published in 1966-67 and several more are being prepared. *Canadian Wildlife Service '66*, a general report on the Service's activities since 1961, was published. Copies are being distributed to members of the Canadian Wildlife Federation.

In 1966 the Canadian Wildlife Service awarded ten scholarships of \$1,200 each to support graduate students in various fields of terrestrial wildlife biology. In 1967 the number of scholarships was increased to 16. University research in wildlife biology is aided by contracts, which totalled \$10,000 in 1966 and will rise to \$25,000 in 1967. Under the National Wildlife Policy and Program such contracts will eventually reach an annual total of \$50,000.

The Canadian Wildlife Service aids developing countries by assigning biologists to duty overseas under the auspices of the External Aid Office. One biologist served as an ecologist in Tanzania. Another is presently serving as Adviser in Wildlife Management to the Government of Malaysia. In addition, from time to time Colombo Plan students study the Service's activities and methods and sometimes participate in field work.

Central Services

Finance and Management

The Office of the Financial and Management Adviser continued to implement the recommendations of the 1964 Management Study report.

A Management Budgeting group was established along with a Program Analysis and Management Accounting group. The staffing of Computer Information Systems continued at a rapid pace during the fiscal year.

The conversion of the department to program budgeting was completed, and a Financial Management Manual was issued. Training teams were sent to the major field offices throughout the country to introduce the new system.

Management Services

A pool of expertise has been established in Management Services. The personnel are skilled in various management analysis techniques and are capable of providing an increasingly effective specialist advisory service to all levels of departmental management.

In the 1966-67 fiscal year, Management Services, on behalf of the various branches of the department, undertook 29 management improvement studies covering a wide variety of management problems. As a result, potential savings in excess of \$3.5 million were identified. Of this amount some \$900,000 should be realized in the 1967-68 fiscal year with the balance being realized over the next five years.

Additional benefits should be improved communications, better control of public funds, clearer definition of responsibilities, increased productivity, and improved service.

In the 1966-67 fiscal year, Management Services operated the Forms Management Unit. The improvements implemented should reduce the operating expenses connected with the use of forms in the department.

Management Services is now embarking on an expanded program of Records Management. It will include all aspects of paperwork management and will result in improved service through a more effective system of creation, retention, retrieval, distribution and disposal of records.

Materiel and Supply

A fundamental change in the approach to materiel management was achieved during the fiscal year with advances being made in the conversion of supply procedures, from individual branch to departmental. Paramount was the establishment of supply offices in Fort Smith, Calgary, Ottawa (Arctic

District) and Halifax. Each is staffed and operated under standardized terms of reference developed by Materiel and Supply.

A guide to more efficient warehousing practices was issued. This, combined with improved buying and inventory control techniques, will eventually reduce inventory handling and holding costs by a minimum of 25 per cent.

Techniques to control low value expendable items are now being tested in the departmental Central Stores prior to their application in the field. Standardized stores accounting procedures are also in the final stages of development. They will replace the variety of procedures now in use throughout the department.

With the increased delegation of purchase authority, arrangements were made to use the buying services of the Department of Defence Production at local levels when advantageous to the department. Through this decentralization, lead times have been reduced by 30—50 per cent and the paper work required in tendering and awarding contracts by the department has been cut in half.

A study of the distribution system into and within the Mackenzie District was completed. As a result, a trucking contract was awarded to move departmental materiel from Edmonton into the district. Estimated annual savings is expected to be \$40,000. Recommendations to relocate stores facilities and establish improved stores control are now being carried out.

Savings of \$15,000 annually in transportation costs have been made by using parcel post and routings more effectively. This figure should rise significantly as further improvements are made.

The proper scheduling of requisitions and early purchasing action for materials for northern re-supply have resulted in a more effective operation. It has reduced the risk of paying premium prices and premium transport costs for last minute buys, and allows more time to deal with unforeseen requirements.

Materiel and Supply has also contributed information and assistance to the Eastern Arctic Supply Study, being conducted by Management Services. At least \$100,000 is expected to be saved when the recommendations of the study are implemented.

Program Analysis and Management Accounting

This group, organized in August 1966, is responsible for evaluating and reviewing departmental programs. It assesses and determines the impact on the financial and personnel resources of the department; develops and coordinates management accounting systems and procedures, and administers an accounting service for the Central Advisory Services of the department and the Resource and Economic Development Group.

It also provides an advisory service in financial planning and administration; assists functional managers and other managerial personnel in the development of budgets, forecasts and related data.

The introduction of program budgeting and responsibility accounting throughout the department makes it imperative that objective standards and measurement indices be continually developed by the group, to serve in the effective preparation, development and analysis of both short and long-range financial plans.

Computer Information Systems

In March 1966, Computer Information Systems became operative and began developing advanced techniques of information processing within the department. An organizational and recruiting effort in the past twelve months has resulted in the formation of a team of highly competent systems engineers and programmers.

Approximately seventy computer programs have been written and implemented for the department. Other techniques have been used to produce approximately eighty additional computer reports. Each branch of the department has been serviced. The department is now one of the principal users of the Central Data Processing Service Bureau of the government.

A fully automated system, to provide a manpower inventory of the almost 8,000 positions in the department, is now operative. The registry of 200,000 reserve Indians is being maintained on a computer basis. The Canadian Wildlife Migratory Game Bird Permit System is fully automated and hunters will be surveyed through a computer selection process. These, and other computer systems implemented by the group, provide immediate response to management's needs. Besides being more effective, the computer systems are also more economical. Several advanced mathematical techniques and simulations have been used in analyses for education and resource management.

Intensive effort will be made during the coming year in applying scientific and mathematical techniques to the management problems of the department. At the same time Computer Information Systems will provide normal data processing services, both commercial and scientific, to the branches in their day-to-day operations.

Manpower Budgeting

The Manpower Budgeting group, established in October 1966, is charged with designing and implementing systems for establishment records and controls; the application of man-year determination criteria to the establishment; and identification of increased manpower productivity that may be or is being achieved by the department. It also provides an advisory service on such matters as organizational relationships, changes in use of positions and new position requirements.

Emphasis in the coming year, will be placed on implementing a new establishment management policy. With the addition of the Indian Affairs Branch, and through growth, the total departmental establishment will reach 8,128 man-years in 1967-68. Concurrently with this growth, the Treasury

Board has delegated to the department greater authority for establishment control. This allows greater flexibility in establishment utilization to meet changing departmental needs. The new policy will make the establishment a viable instrument for meeting departmental objectives while at the same time permitting establishment evaluation to ensure effective use.

Administration

A number of steps were taken by Administration during the fiscal year. The departmental network of Telex stations was expanded from five to eleven. This provides faster and more economical communications than previously obtained by commercial telegraph.

Mechanical addressing equipment was installed to improve bulk mailing methods and the department's mailing and distribution lists were partially automated.

A Manuals Section was formed to co-ordinate the production of departmental manuals. Format standards were produced and a Financial Management Manual, the first of a series, was published.

Departmental Library

The reorganization of the Departmental Library continued during the fiscal year. The Indian Affairs Branch Library was separated from the Citizenship collection and the formal move into the Centennial Tower took place last October. The book collection of the Indian Affairs Branch was combined with those of National and Historic Parks, Northern Affairs and Canadian Wildlife Service to form one reference Library instead of four separate collections.

The Library continued to grow in size and the collection was greatly expanded in the fields of fine arts, archaeology, wildlife and resources. During the fiscal year, several groups of university professors and their students visited the Library, and its facilities were used by many members of the public. Service was provided to field offices upon request so that books were on the move to and from the National Parks, the Indian Agencies and the remote areas of the Arctic and the Northwest Territories. Through interlibrary loan, about 2,000 books were circulated to universities and libraries throughout Canada and the United States.

Legal

The Legal Adviser and his staff are called upon to advise on a wide variety of departmental activities. Some matters, such as those to which the Claims Regulations apply, are required by law to be referred to the Legal Adviser. Many other matters are the subject of consultation.

During the fiscal year 1966-67, the liability of the Crown was a recurrent topic. Leases, contracts, permits, and licences were drafted almost daily in the Legal Adviser's office, as were submissions to the Treasury Board and the Governor in Council, Orders in Council, regulations and amendments to regulations.

The Legal Adviser advised the Deputy Minister, Assistant Deputy Ministers and senior officers on the legal implications of departmental policy and legislation. In some cases, he drafted Legislation before it was discussed in detail with the Department of Justice. In matters which result in or which involve actions in the Courts, the Legal Adviser is liaison officer between this department and the Department of Justice.

As the Commissioners of the Northwest Territories and the Yukon Territory administer the government of the territories under instructions given him by the Governor in Council or the Minister of this department, the Legal Adviser was, during the year, called upon for advice by the Deputy Minister, Assistant Deputy Ministers and the Director of the Northern Administration Branch in connection with the Northwest Territories and the Yukon Territory.

As representative of the Northwest Territories the Legal Adviser took part in the Conference of Commissioners on the Uniformity of Legislation in Canada. At the annual conference of the Canadian Bar Association the work of the Conference of the Commissioners on Uniformity of Legislation in Canada was assessed and the Legal Adviser participated in this conference. A member of the Legal Adviser's staff took part in the Federal-Provincial Wildlife Conference.

Program Management Evaluation

Program Management Evaluation, previously known as Management Audit, is a small specialized group of professionally trained personnel operating out of headquarters under the direct authority of the Deputy Minister. The title of the group was changed in the fiscal year to demonstrate the positive nature of the function and to stress the co-operative responsibilities of the group in conjunction with all levels of management in the effective implementation of the department's programs.

In April 1966, the group commenced its program and in the course of the fiscal year carried out reviews of operations in the field in each of the branches. In addition to evaluating the objectives, planning, programming, organization, and management systems of the areas studied and reporting the findings to the Deputy Minister to assist him in making policy decisions, the reviews also determined the actual management patterns in the area studied and the types of problems faced by their organizations. These patterns will be analysed progressively as future studies are conducted to develop, where possible, a unified management posture in the department.

In September 1966, the Program Management Evaluation group, because of its experience and specialized knowledge, was assigned by the Deputy Minister to a number of special tasks requiring urgent solutions. This action was taken in order to maintain the tempo of decentralization of program management, which the department had embarked upon in 1965, and to ensure that the accompanying responsibility and accountability devolving

on the field managers was proceeding according to schedule. At the same time a management reporting system, necessary for efficient operation, was designed to be implemented in the 1967-68 fiscal year.

Members of the group attended a number of management improvement courses in the fiscal year to maintain the technical competency of the group in carrying out its function.

Information Services Division

The Information Services Division provides the department with a central information, editorial and graphic art service.

The Division is responsible for planning and carrying out, in cooperation with the branches, projects that interpret departmental policies and programs to an audience located from coast to coast.

Its main function is to act as the channel through which creative contact is maintained with the public, national, regional and local news media, and with editors, translators, printers and designers.

To maintain these activities the Division produces booklets, articles, news releases, background papers, press kits, etc., and handles a year-round volume of mail and telephone requests for information. It is also responsible for preparation of the Annual Report, the staff quarterly, and for providing the secretariat of the departmental Publications Committee.

During the year 168 releases were issued in French and English, to press, radio and television stations. Fifty-one speeches were processed and distributed.

The Division deals direct with the public by answering requests for information. During the year, 4,742 enquiries were received (mainly from writers, students and editors), and 39,717 booklets, pamphlets, mimeographed articles and maps were sent out to answer these requests. A total of 3,500 copies of the Annual Report—including English and French—were distributed to departmental staff, universities, libraries and the press.

Personnel

The Personnel Adviser's Office provides policy advice and guidance on all personnel matters to senior management as well as functional services to Branch Personnel Advisers. It carries out a complete classification service for the department; conducts a program of manpower planning and staffing; and implements departmental development and training programs. This office also aids in the determination and administration of terms and conditions of employment and collective agreements for staff of the department, through central agencies. A program of safety and security within the department is maintained by the Personnel Adviser's Office. The purpose of all this is to promote the most effective use of manpower throughout the department.

Employee Relations

The introduction of collective bargaining in the public service has greatly expanded the role of the employee relations section of the Personnel Adviser's Office. The Personnel Adviser is responsible for maintaining satisfactory relationships between manager and employee, while fostering constructive understanding in negotiating contracts. An extensive training program was prepared to make departmental managers and supervisors both in Ottawa and in the field, aware of their rights and responsibilities under collective agreements.

The in-pur of departmental employee relations officers was required, in order that Treasury Board Officers may deal adequately with staff association demands, and maintain a consistent application of contract provisions. Plans were formulated to establish labour relations expertise at Branch and Regional levels to better assist and advise field management in administering grievances and discipline and retaining management's rights in a uniform manner throughout the department.

Increased emphasis was placed on the department's Suggestion Award and Merit Award programs, to encourage greater employee participation. The Long Service Award program is still in effect.

Safety

During the past year, the department appointed a Safety Officer who took over the co-ordination of the department's accident control program. A policy directive was issued to the Branches emphasizing the need of accident control and the important function of line management in maintaining this control. First line supervisory training in accident control has begun at

regional offices across the country. All Workmen's Compensation Boards and provincial Safety Councils were contacted and will provide a courtesy service to departmental operations within their provincial boundaries. A method for the maintenance of accident control data is underway; safety committees and safety inspection have been designed to produce as much self-direction at local levels as possible.

Personnel Data Systems

The department and the Central Data Processing Service Bureau of Treasury Board have been jointly responsible for producing 10 monthly reports from the Master Establishment File, phase 1 of automating personnel records. Reports from this file are distributed regularly to line managers and personnel administrators to keep them informed of their establishment. The second phase of setting up the Master Employee File from the departmental card records and files, is nearing completion under the guidance of the Computer Information Services Staff. Along with a detailed print-out on the employee there will be approximately 15 reports produced at the outset of this project, from the employee data for manpower planning and for the use of line managers to aid in their decisions. The majority of the reports will replace those now being produced manually and will save many man-hours of clerical effort.

Staffing

The position strength as of March 31, 1967, was as follows:

Branch	Classified Positions		Prevailing Rate		Grand
	Ottawa	Field	Total	Positions	Total
Departmental Administration ..	260	4	264	1	265
Resource & Economic Group ..	65	26	91	1	92
Canadian Wildlife Service	49	93	142	nil	142
National & Historic Parks	206	713	919	2,033	2,952
Indian Affairs Branch	330	2,761	3,091	61	3,152
Northern Administration	279	960	1,239	507	1,746
TOTALS	1,189	4,557	5,746	2,603	8,349

The grand total of 8,349 positions represents an increase of 866. During the year there were 1,354 new appointments to the classified staff and 823 separations. The department conducted 149 promotional competitions and the Public Service Commission held 157 competitions on behalf of the department. The graph in the appendices shows the growth of the department from March 31, 1966 to March 31, 1967.

During the latter stages of the year 1966, the Minister announced that Yellowknife would become the capital of the Northwest Territories and that a large share of the federal responsibilities would be handed over on a phased basis to the Northwest Territories Government. The staff implications of this move are significant, and considerable time has been spent examining and comparing federal employment conditions with those of the Territorial

Government with a view to some anticipated movement of staff to the Northwest Territories Government.

Classification and Pay

In the fiscal year 1966-67, the office of the Personnel Adviser was heavily involved in the Classification Revision Program. A total of 1,050 positions were converted in the Administrative and Foreign Service Category and in excess of 3,000 positions were converted in the operational category. In conjunction with the conversion, teams of classification officers visited most field locations from Halifax to Vancouver and in the N.W.T. to provide orientation and training to field staff. One hundred and seventy four man days were devoted to training of line or other departmental officers in the principles and procedures followed in the new classification system.

A total of 499 new positions and 189 reclassifications were reviewed and submissions made to the Bureau of Classification Revision for approval.

Development and Training

Training activities showed a marked increase of 29.63 man years over the previous year. The 57.38 man years spent on training activities in the 1966-67 fiscal year are outlined in the bar graph in the appendices.

An educational leave policy was developed and distributed to all managers by the end of the year. It emphasized the need for long term planning and the requirement to integrate operational need with career development when considering nominations for educational leave. During the year, 20 employees went on educational leave for periods of a few months to a full academic year.

A new employee evaluation program was introduced, and management briefings at headquarters and in the field represent a large part of the man years spent on departmental training. Three times as many man years were devoted to the Junior Executive Officer—Junior Officer Program. Most of this increase occurred in the junior officer field program.

Language Training

The phased transfer of the Language Training Centre from the department to the Public Service Commission which began in September 1965, was concluded by April 1, 1967.

Under the administration of the department during the 1966-67 fiscal year, the language centre continued to provide instruction in French, English, Eskimo and Spanish for departmental employees as well as for employees of other departments and agencies. Total yearly attendance in the French language program was 725, including 513 employees from other departments and agencies. In addition departmental employees attended courses in other schools as follows: Montreal—12, Ottawa—5, Quebec City—1.

The course for the French language program continued to be "Voix et Images de France" supplemented by a new program developed in Canada entitled "Le Français International". Instruction continued to be carried out

at three levels: beginner, intermediate, and advanced. Modern audio-visual techniques were used in classroom instruction and in the language laboratory.

Courses in English as a second language continued in the spring term of 1966 with 137 students in attendance, 104 of whom were from other government departments and agencies. In the 1966 fall term, 147 students were in attendance with 132 of these being from other government departments and agencies.

The schools continued to aid Northern Administration Branch in development of teaching and language laboratory materials, and supervised the operation of the language laboratory for teaching Eskimo to federal employees who were to be employed in northern Canada.

A special crash program operated in conjunction with the Public Service Commission in the teaching of Spanish was concluded during the fiscal year. This program met the particular need for a Latin-American conference which was held in Ottawa late in 1966.

BRANCH PERSONNEL ACTIVITIES

Indian Affairs

The Branch Headquarters staff moved into the Centennial Tower building in October 1966, and thus completed the transfer to the Department of Indian Affairs and Northern Development from Citizenship and Immigration.

As a result of the new departmental organization, a personnel administrator was appointed in each region and this has increased and improved liaison between the field and headquarters.

A four-month course was conducted by Branch Staff Training for hostesses for the Indians of Canada Pavilion at EXPO '67. This was a three-phase program based on language training, personality development and Indian culture.

Northern Administration

A major drive was made by the Branch Personnel Office, in spite of a heavy workload, to fill as many vacancies in the Branch as possible.

As a result of a speech given by the Minister outlining opportunities in the north, over 2000 inquiries were received from the public about employment there. This was a marked increase over the previous year.

In Branch Training, the major program was the training at Northern University of the eight newly appointed Northern Service Officers. The course was designed to acquaint these members with the Branch's programs and operations in the north, and equip them to co-ordinate these programs at the area level.

National and Historic Parks

A most important milestone has been the establishment of three scholarships in the amount of \$2,000 each for Canadians in support of graduate training at Canadian Universities related to the planning and management of natural parks and outdoor recreation areas.

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List of Officers of the Department

Minister's Office

Minister	Honourable Arthur Laing
Parliamentary Secretary	Dr. Stanley Haidasz
Executive Assistant	G. F. Gibson
Special Assistant	L. S. Marchand
Special Assistant	D. L. Ingram

Deputy Minister's Office

Deputy Minister	E. A. Côté
Senior Assistant Deputy Minister	J. A. MacDonald
Assistant Deputy Minister (Northern Development)	J. H. Gordon
Assistant Deputy Minister (Indian Affairs)	R. F. Battle
Executive Assistant to the Deputy Minister	W. D. Mills
Administration	A. Martin
Departmental Library	R. Wood

Northern Co-ordination and Research

Secretary, Advisory Committee on Northern Development	G. W. Rowley
Chief, Northern Co-ordination and Research Centre	A. J. Kerr

Program Management Evaluation Information Services Division

W. A. Tuskey
Irene Baird

Financial and Management Adviser's Office

Financial and Management Adviser	W. E. Armstrong
Deputy Financial & Management Adviser	R. A. Bishop
Management Services	G. A. Yeates
Materiel and Supply	L. H. Robinson
Program Analysis and Management Accounting	P. Lesaux
Manpower Budgeting	P. Fillipoff
Computer Information Systems	A. B. MacArthur

Personnel Adviser's Office

Personnel Adviser	W. R. Luyendyk
Deputy Personnel Adviser	W. Ritchie
Development and Training	I. S. Harlock
Employee Relations	D. Hueston

Classification and Pay Administration	E. A. Baxter
Manpower Utilization	R. Collins
Personnel Administration	O. O'Connor
<i>Legal Adviser's Office</i>	
Legal Adviser	Dr. H. Fischer
INDIAN AFFAIRS BRANCH	
Director	J. W. Churchman
Financial and Management Services Adviser	J. M. Thibault
Federal-Provincial Relations- Chief	L. Brown
Personnel Administration- Administrator	D. W. Derragh
<i>Policy and Planning Directorate</i>	
A/Director	C. I. Fairholm
<i>Administration Directorate</i>	
Director	J. D'Astous
Secretariat-A/Head	H. Sprott
Information Division-A/Head	J. A. Shelton
Lands-Membership and Estates Division-Chief	G. Poupore
Supporting Services Division-Head	M. Jutras
<i>Development Directorate</i>	
A/Director	A. G. Leslie
Social Programs Division-Chief	A. W. Fraser
Resource and Industrial Division-Chief	R. G. Young
Engineering and Construction Division-Chief	G. J. Brown
<i>Education Directorate</i>	
Director	R. F. Davey
Administration Services-Head	P. Deziel
Superintendent of Schools-Chief	L. G. Waller
Vocational Training and Special Services Division-Chief	L. Jampolsky
NORTHERN ADMINISTRATION BRANCH	
Director	C. M. Bolger
Assistant Director	C. T. W. Hyslop
Assistant Director	A. B. Yates

Financial & Management
Advisory

Division-Chief
Personnel Administration-Chief
Industrial Division-Chief
Engineering Division-Chief
Welfare Division-Chief
Education Division-Chief
Territorial Division-Chief
Legal Officer

N. Hembruff
W. E. R. Collins
J. W. Evans
K. W. Stairs
F. J. Neville
D. Simpson
D. A. Davidson
F. Smith

Administrator of the Arctic

Administrator

A. Stevenson

Administrator of the Mackenzie

Administrator

K. Hawkins

NATIONAL AND HISTORICAL
PARKS BRANCH

Director
Assistant Director (General)
Assistant Director (National Parks)
Assistant Director (Historic Sites)
Financial and Management Advisory
Division
Engineering and Architectural
Division
National Parks Service-Planning
National Parks Service-Operations
Canadian Historic Sites Division
Assistant Chief
Personnel Adviser

J. R. B. Coleman
J. I. Nicol
A. J. Reeve
P. H. Bennett
D. H. Beatty
J. E. Savage
L. Brooks
J. C. Charron
P. H. Schonenbach
A. C. Holden

RESOURCE AND ECONOMIC
DEVELOPMENT GROUP

Director
Resource Management Division-Chief
Economic Staff Group-Chief
Administration Services-Chief

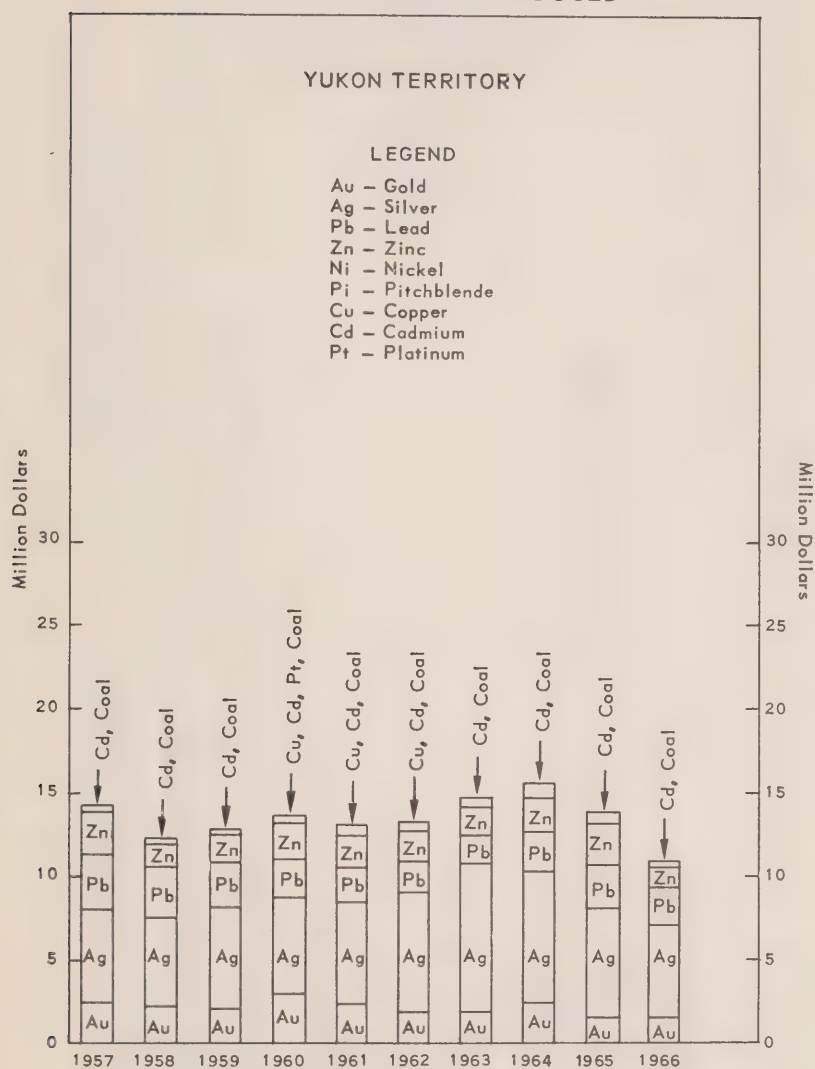
A. D. Hunt
G. H. Caldwell
Dr. T. F. Wise
B. Shapiro

CANADIAN WILDLIFE SERVICE

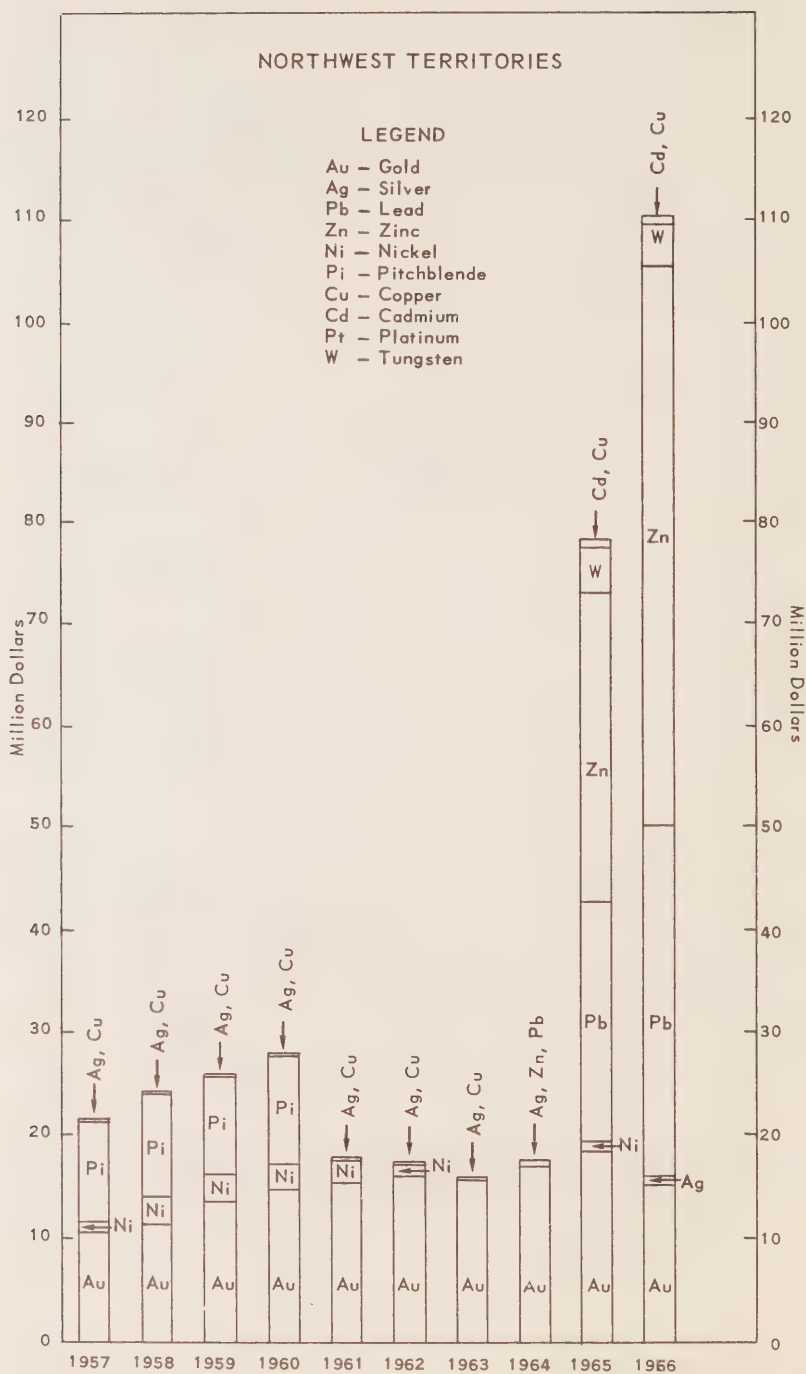
Director
Deputy Director

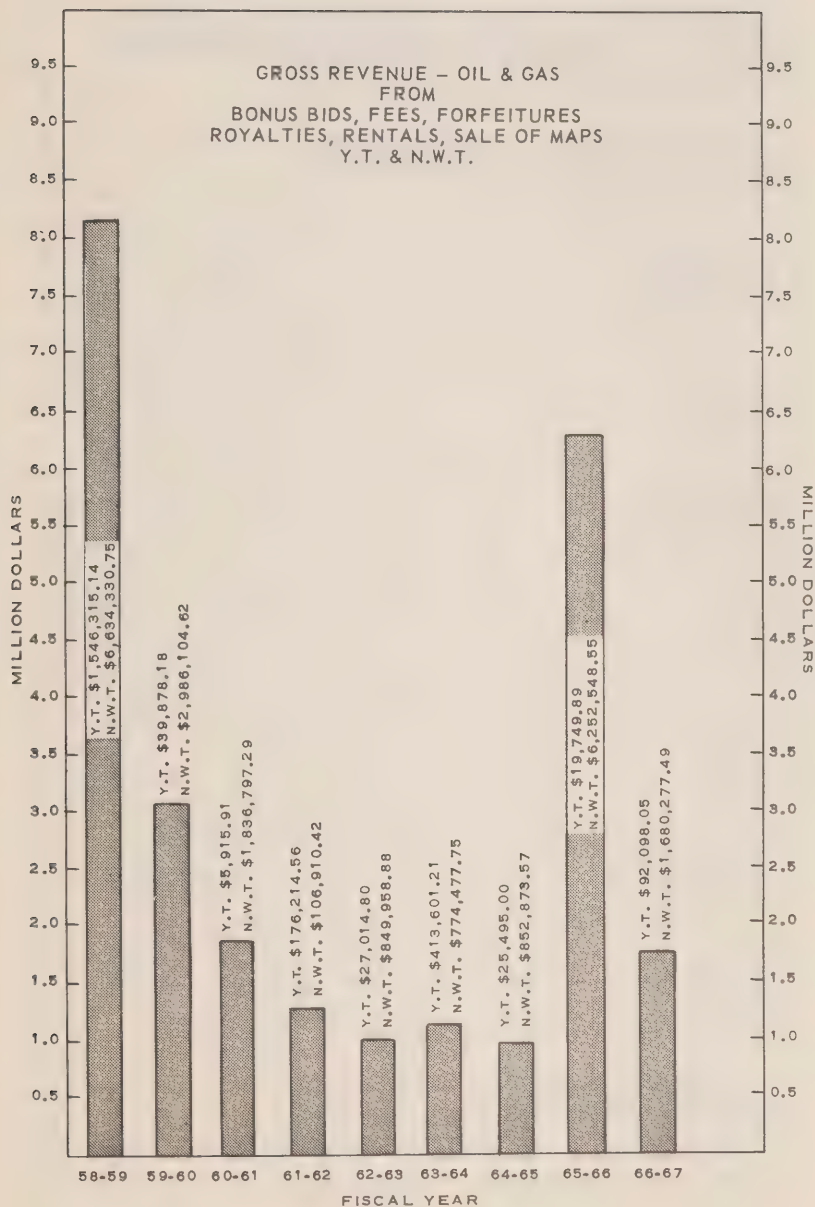
Dr. D. A. Munro
Dr. J. S. Tener

VALUE OF MINERALS PRODUCED



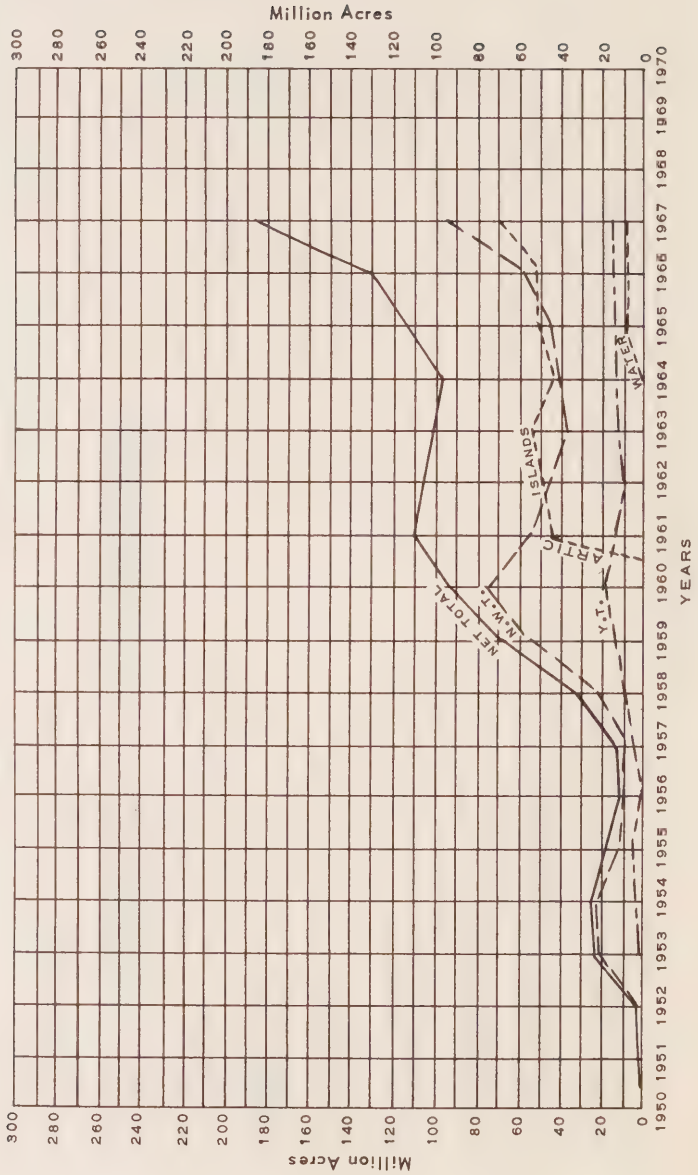
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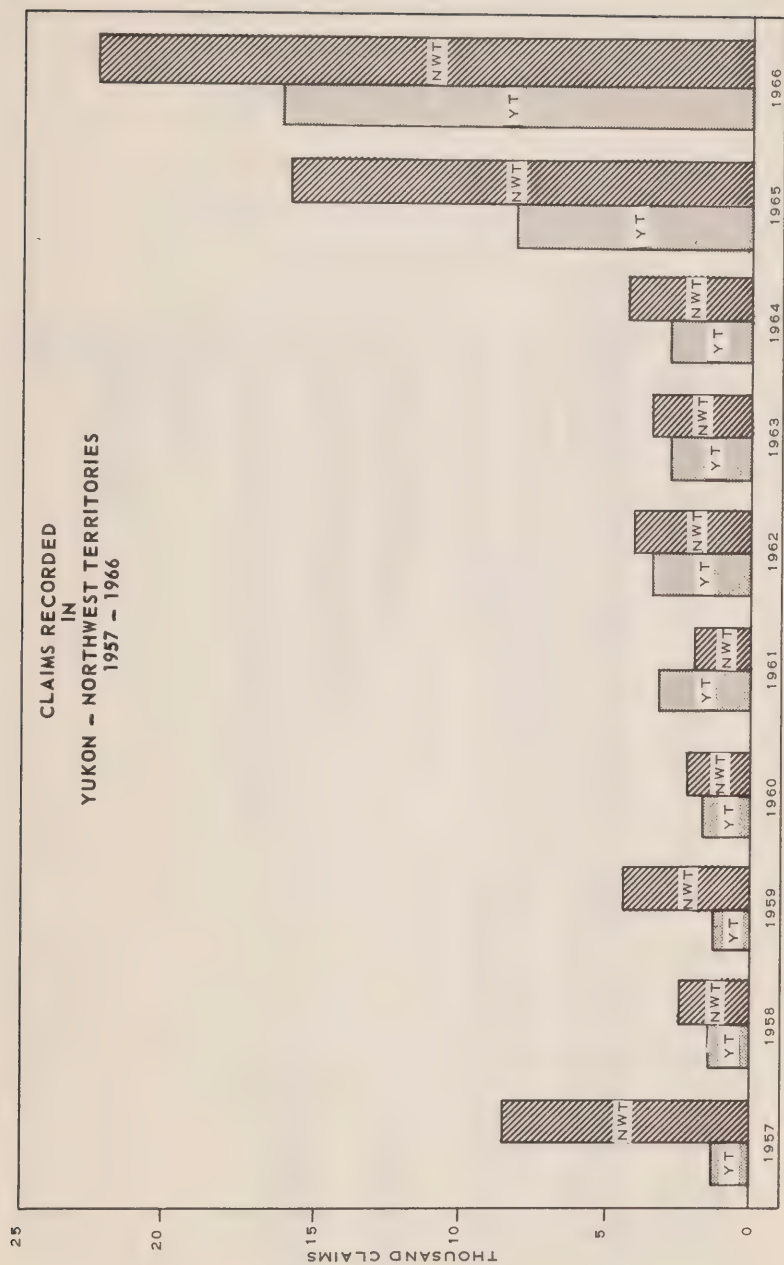




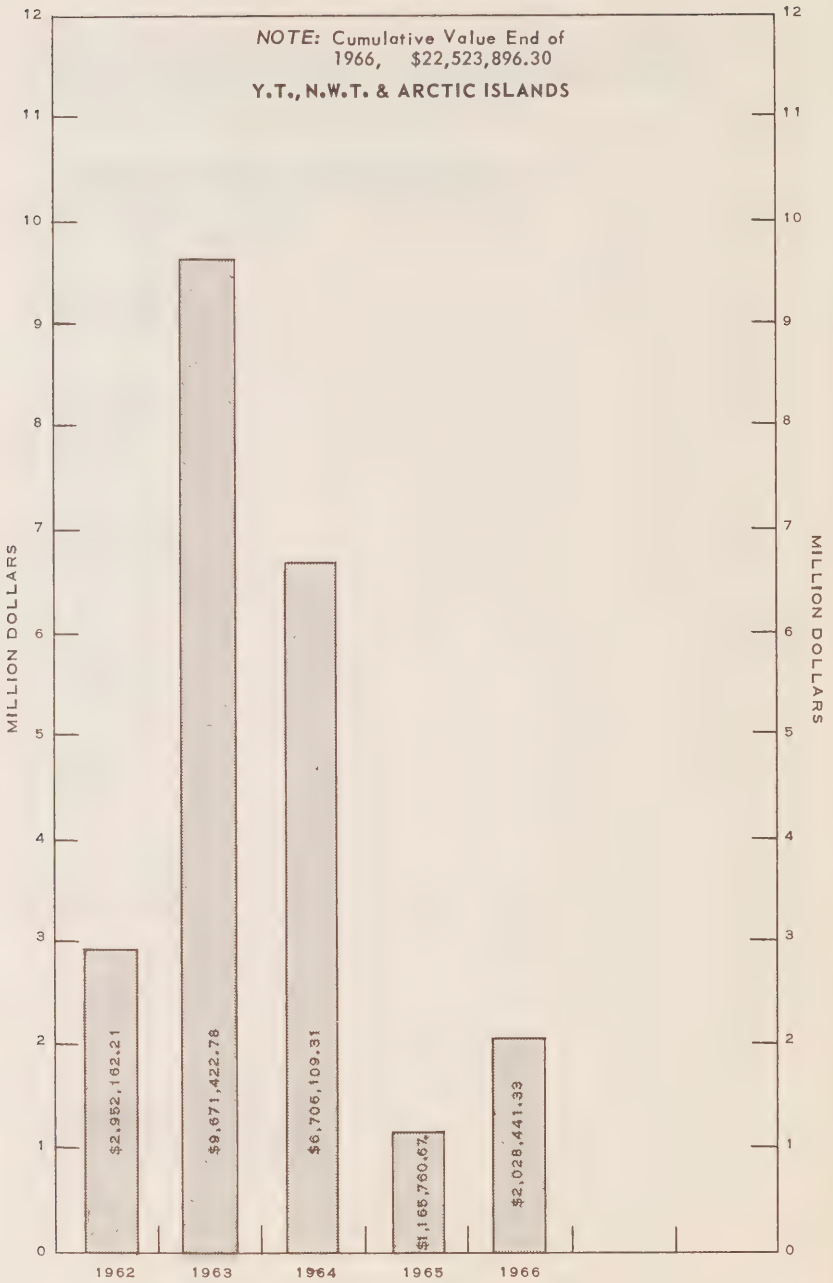
ACREAGE HELD UNDER OIL & GAS PERMIT
NORTHERN LANDS

- NORTHWEST TERRITORIES PERMITS
- ARCTIC ISLANDS PERMITS
- WATER PERMITS (Arctic Coast)
- YUKON TERRITORY PERMITS
- NET TOTAL (Excluding Reservations)

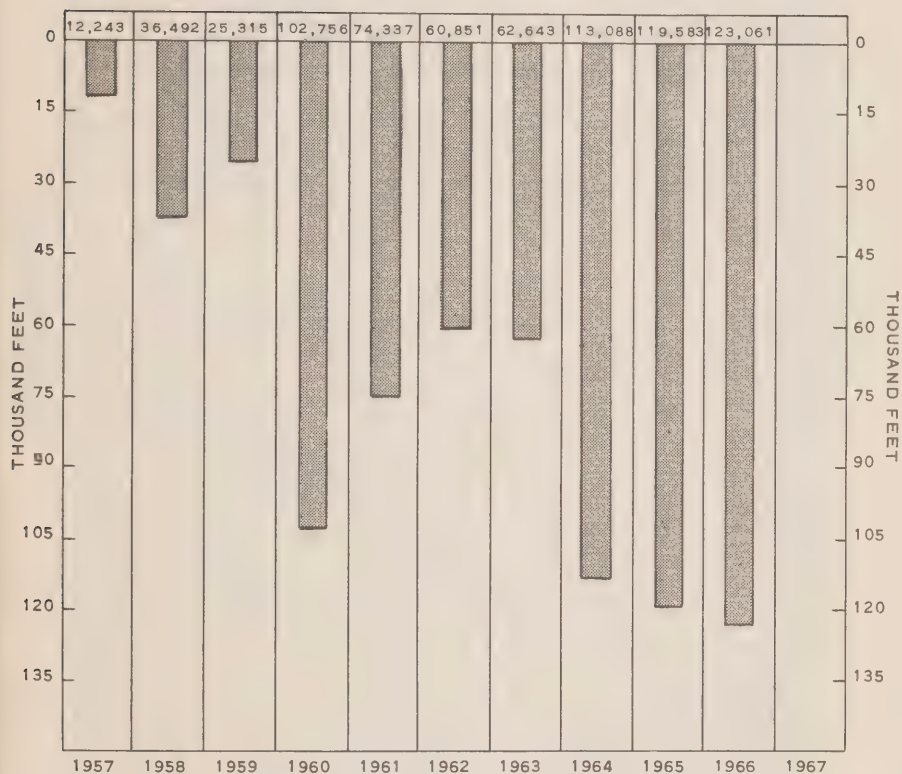




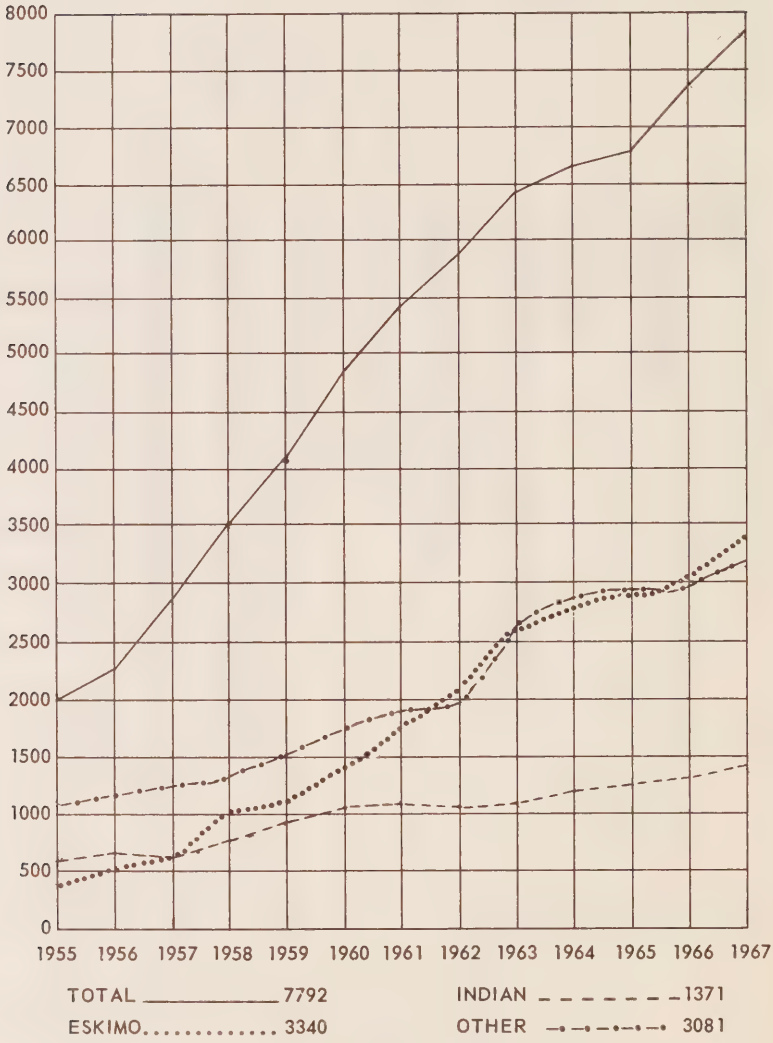
VALUE OF WORK BONUS BIDS



FOOTAGE DRILLED
YUKON, NORTHWEST TERRITORIES
& ARCTIC ISLANDS



NORTHERN ADMINISTRATION BRANCH
SCHOOL ENROLMENT GROWTH



Mackenzie District

Classification of pupils for schools in full-time operation

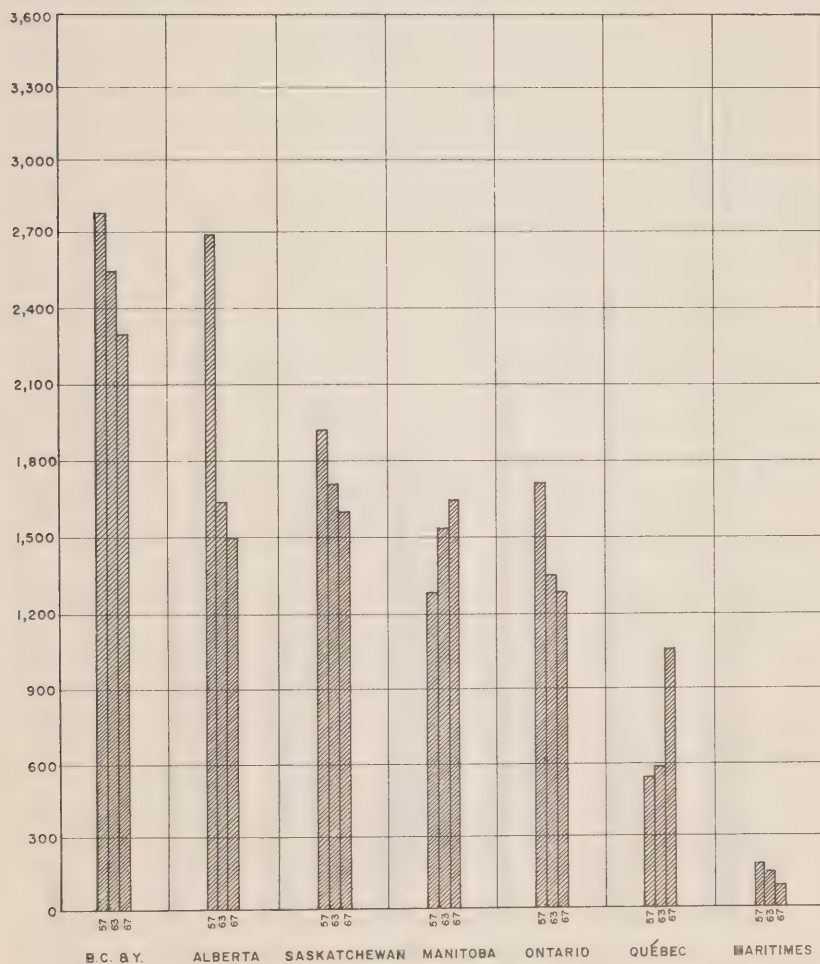
MAR. 31 '67

School	Type	Ca- pa- city	No. Tea- chers	No. of Classrooms		Enrolment by status						Enrolment by Grade or Class												Religion		Total Enr't					
				Elem.	H.S.	Regular		Sp.		Enrolment by status				Enrolment by Grade or Class													RC	PROT			
						M	F	M	F	M	F	VT	AU	1	2	3	4	5	6	7	8	9	10	11	12						
Aklavik	FDS	150	7	5	1	34	33	7	14	23	20					36	18	7	14	21	12	12	11					19	112	131	
Cambridge Bay.....	"	63	3	3		24	24			4	8					22	13	10	9	5	1							8	52	60	
Coppermine	"	150	6	6		50	57			2	7					54	24	12	11	3								16	100	116	
Discovery	CDS	25	1	1						11	9					4	1	3	2		1	3	1					12	8	20	
Franklin	FDS	125	5	4	1			51	45	1	1					29	15	9	13	11	12	7	2					96	2	98	
Fort Good Hope.....	"	50	1	2				6	10	1	3					11	4	1		2								20		20	
Fort Liard	"	265	8	7	1	3	1	38	77	2	25					37	24	25	15	17	18	11	17					6	4	10	
Fort McPherson.....	"	50	4	2				10	16	9	10					18	13	14	14	15	7							45		150	
Fort Norman.....	"	100	4	4				33	38	12	10					30	16	14	15	7								92	1	93	
Fort Resolution.....	"	150	7	5	1			23	24	47	47					25	19	25	27	15	9	12	9					137	4	141	
Fort Simpson	"	325	18	9	3	5		14	14	92	93	51	52			69	47	28	53	24	34	18						235	81	316	
Fort Smith	"	775	41	22	10	9	7	6	125	130	283	244				88	71	87	75	63	61	76	43					616	179	795	
Gjoa Haven	"	40	2	2				18	18	3	11	144	125			17	4	6	7	1								15	21	36	
Hay River	"	300	17	6	6	5	2	22	26	79	84	4	2			26	12	6	3	6	7	22	30	11	21	11	41	245	286	361	
Holman Island.....	"	50	2	2				10	10							4	3	4	1	6	1							10	44	54	
Inuvik	"	1020	56	30	13	7	197	196	6	10	230	228				195	92	95	76	72	89	53	54	39	34	27	383	631	1014	161	
Jean Marie River.....	"	25	1	1												4	3	4	1	6	1							20		20	
Nahanni Butte	"	25	1	1												9	6	3	8	4	5	4	1					11	26	37	
Norman Wells	"	50	2	2						20	17					10	6	3	3	1	2							19		19	
Pelly Bay	"	125	5	4	1			12	7							14	17	10	9	10	6	8	7					22	59	81	
Pine Point	"	150	6	6				61	45	14	4					59	18	21	16	7	3							119	5	124	
Rae	"	25	1	1				7	9							6	2	2	5	1								16		16	
Reindeer Station	"	50	2	2						28	17					21	8	11	2	3								45		45	
Snowdrift	"	75	3	3				18	31							25	12	2	3	3	5							9	41	50	
Spence Bay	"	150	6	5	1	3	76	51			3					38	20	17	13	24	9	5	4					42	88	130	
Tuktoyaktuk	"	25	1	1												3	6	6	3	2	4	1	2					23	4	27	
Tungsten	"	50	2	2				8	14	26	33	12	15			72	6	6	3	5	7							108	159	267	
Yellowknife (Sir J.F.)	CDS	400	26	1		10	11	8	14	10	20	86				7	3	8	5	7								25	5	30	
Wrigley	"	25	1	1																											
Total Federal		4773	238	139	48	40	490	490	613	678	1030	960				884	486	454	445	372	313	288	193	152	178	151	105	2193	2068	4261	
Municipal Schools																															
Hay River	RC	175	10	7	2	1		8	13	97	103					45	30	19	33	21	28	15	14					196	25	221	
Yellowknife	PUB	700	24	16	5					250	205					77	53	49	59	56	39	54	43	25					32	423	455
Yellowknife	RC	375	16	9	6			3	4	15	126	119				40	47	44	25	31	20	17	16					274	6	280	
Total Municipal.....		1250	50	32	13	1	3	4	23	26	473	427				162	130	112	117	108	87	86	73	57	10	7	7	502	454	956	
Total Mackenzie ..		6023	288	171	61	41	493	494	636	704	1503	1387	130	110	1046	616	566	562	480	400	374	266	209	188	158	112	2695	2522	5217		

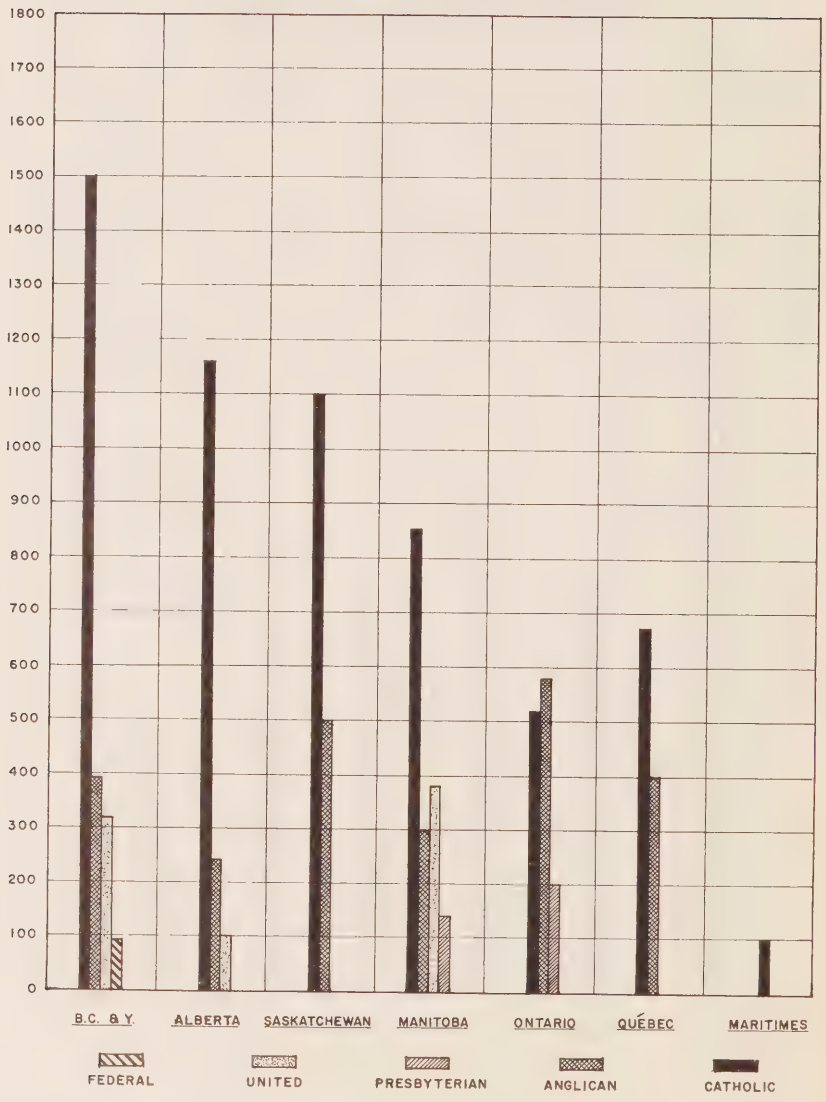
Arctic District Classification of Pupils for Schools in full-time Operation

School	Type	Car- pacity	No. Tea- chers	No. of Classrooms		Enrolment by Status						Enrolment by Grade or Class												Religion		Total En't			
				Elem.	H.S.	Esquimo		Indian		Other	VT	AU	1	2	3	4	5	6	7	8	9	10	11	12	RC		PROT		
						M	F	M	F																			M	F
Arctic Bay.....	FDS	25	1	1		16	14								22	3	3	1			1							30	
Broughton Island....	"	50	2	2		25	30								21	16	8	9										55	
Cape Dorset.....	"	100	5	4		63	52			2	2				54	20	22	10	9		2	1						119	
Clyde River.....	"	50	2	2		19	14								18	6	6	1										34	
Fraser Bay.....	"	550	25	21	1	148	153			59	45				175	8	55	48	22		21	10	7	2	4		50	355	
Grise Fiord.....	"	25	1	1		20	16			1					14	11	7	4										38	
Iqloolik.....	"	75	3	3		45	27			1	2				44	8	15	6	1		1						7	98	
Lake Harbour.....	"	25	1	1		9	11								4	5	8	2										25	
Padloping Island....	"	25	1	1		9	11								4	5	8	2										19	
Pangnirtung.....	"	100	4	4		66	58								25	24	21	15			1							129	
Pond Inlet.....	"	75	4	3		43	42			3	2				34	25	23	12	1								6	79	
Repulse Bay.....	"	50	2	2		19	15			2	3				25	11	7	6	4		2	3						39	
Baker Lake.....	"	150	6	6		62	64								48	17	22	22	13		10						8	124	
Chesterfield Inlet..	"	225	15	6		97	67			1					41	10	22	22	31		9						134	135	
Churchill.....	"	200	14	6		82	68							450													131	119	
Coral Harbour.....	"	75	3	3		36									28	8	10	6			1						15	46	
Eskimo Point.....	"	100	4	4		49	55			3	2				55	25	10	14	4		4		1				39	70	
Franklin Inlet.....	"	100	5	4		42	44			6	9				29	15	13	27	9		6	2					84	17	
Whale Cove.....	"	50	2	2		14	17								14	8	6	7	2		1	1		1			19	21	
Belcher Islands....	"	25	1	1		15	9								9	7	4	4									24	24	
Port Burwell.....	"	25	1	1		11	12								12	6	6				1	1						26	
TOTAL N.W.T. . . .		2000	92	77	1	849	814			86	77			150	35	687	254	273	217	117	57	21	8	3	4		393	1433	1826
ARCTIC QUEBEC																													
Fort Chimo.....	FDS	150	6	6		41	48			2	1				16	16	26	16	11	13	3			1	1		3	100	103
Port-Nouveau-Quebec	"	50	2	2		18	26								26	11	11	11	2									50	50
Poste-de-la-Baleine	"	175	9	7	2	75	54			14	4			2	70	18	26	27	13	6		1						162	162
Ivujivik.....	"	25	1	1		12	15								6	4	4	7										27	27
Koartic.....	"	25	1	1		10	11								11	2	8	12	8	3						1	20	21	
Belin.....	"	50	2	2		25	24								23	16	18	12										77	77
Moucouquac.....	"	75	3	3		32	28								52	29	23	22	10	4	2	3						151	151
Sagloue.....	"	125	5	5		35	31								16	24	24	5	6									66	66
Maricourt.....	"	50	2	2		24	18								7	9	19	7									10	32	42
TOTAL QUEBEC...		800	34	32	2	351	339	16	15	17	11			2	246	134	146	102	66	41		7	3	1	1		14	735	749
TOTAL ARCTIC...		2800	126	109	1	1200	1153	16	15	103	88			150	37	933	388	419	319	183	98	28	11	4	5		407	2168	2575

Indian Affairs Branch
TOTAL ENROLMENT IN RESIDENTIAL SCHOOLS AND HOSTELS

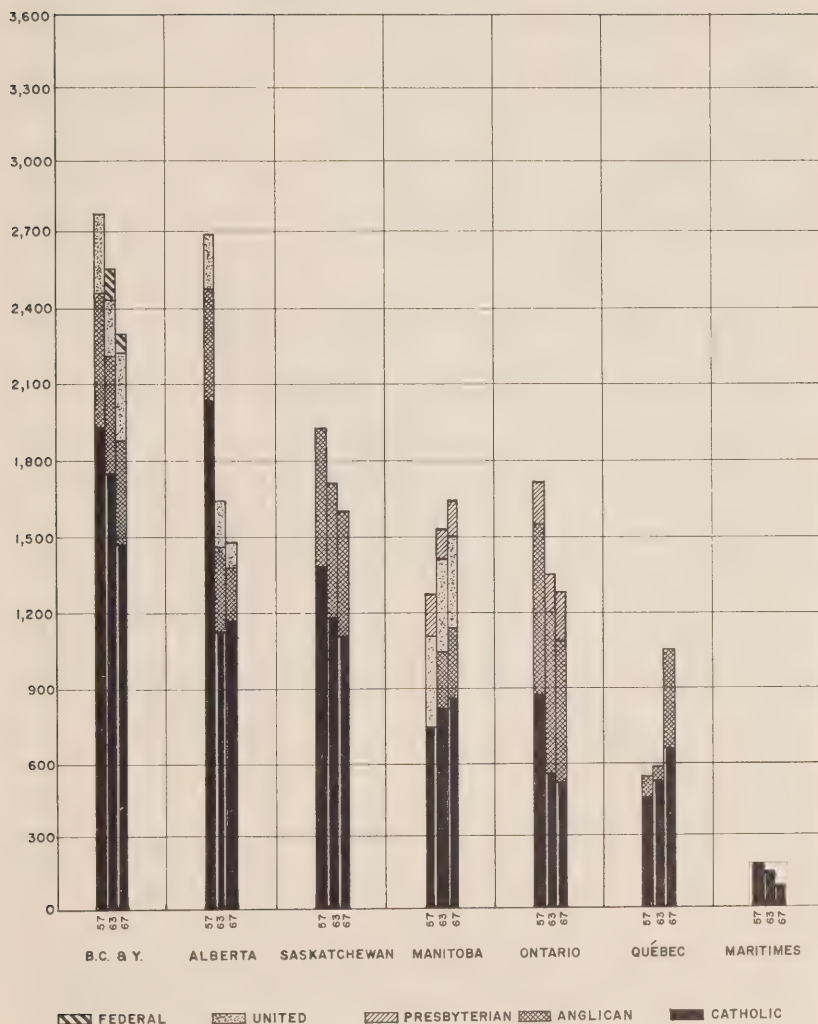


Indian Affairs Branch
1967 ENROLMENT IN RESIDENTIAL SCHOOLS AND HOSTELS
CLASSIFIED BY DENOMINATION AND BY PROVINCE

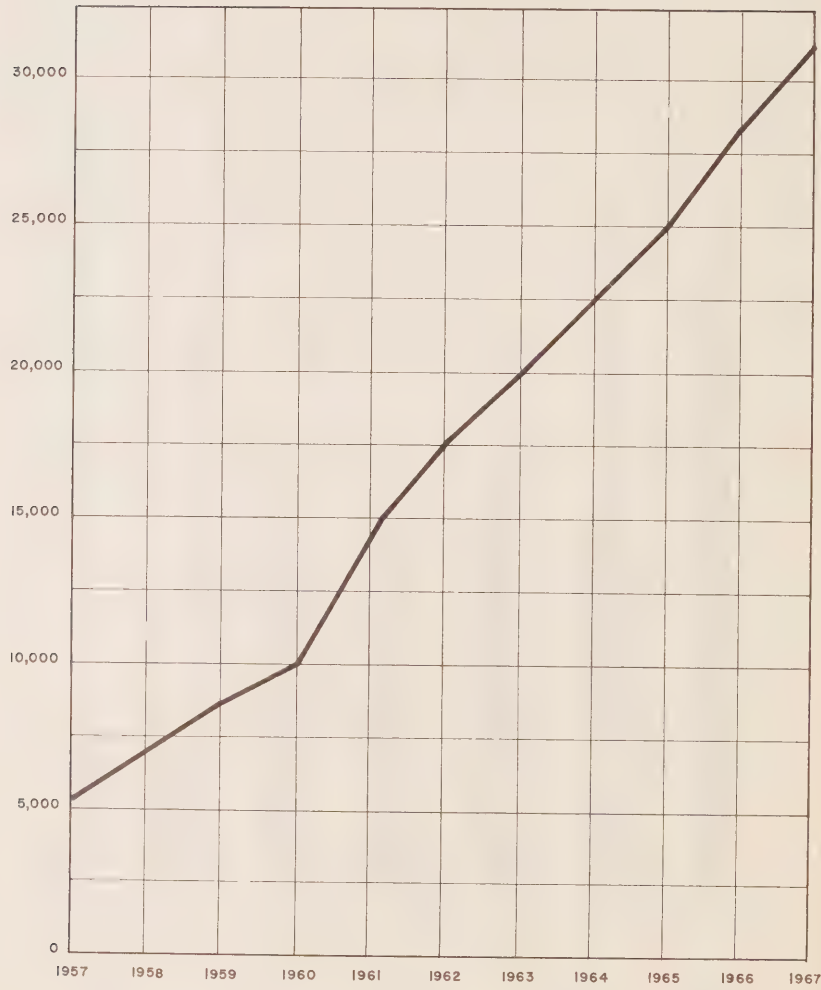


Indian Affairs Branch

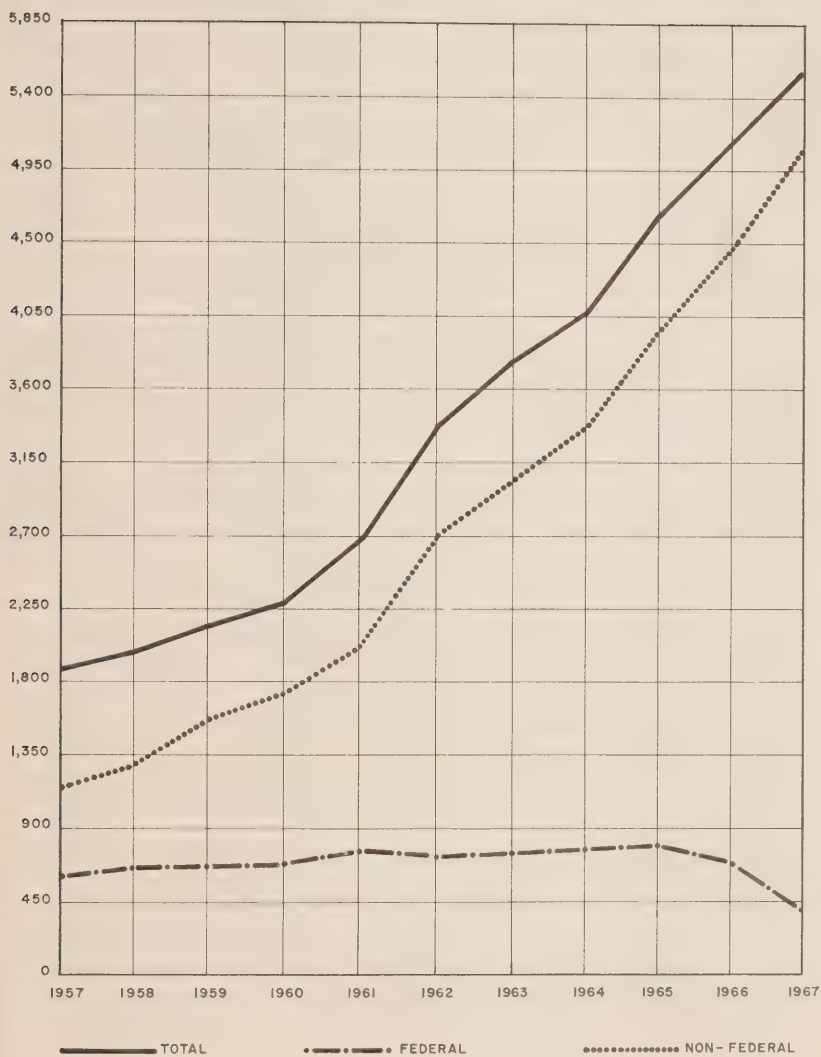
ENROLMENT IN RESIDENTIAL SCHOOLS AND HOSTELS
CLASSIFIED BY DENOMINATION AND BY PROVINCE



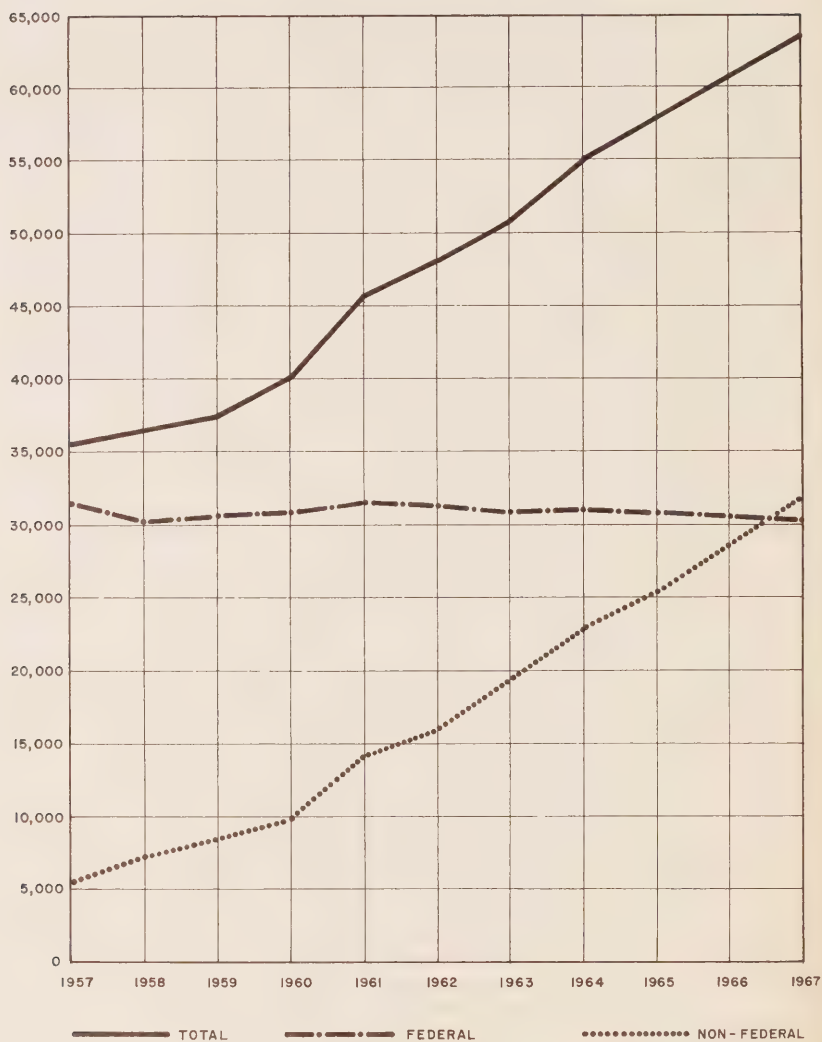
Indian Affairs Branch
ELEMENTARY AND SECONDARY NON-FEDERAL
SCHOOL ENROLMENT GROWTH



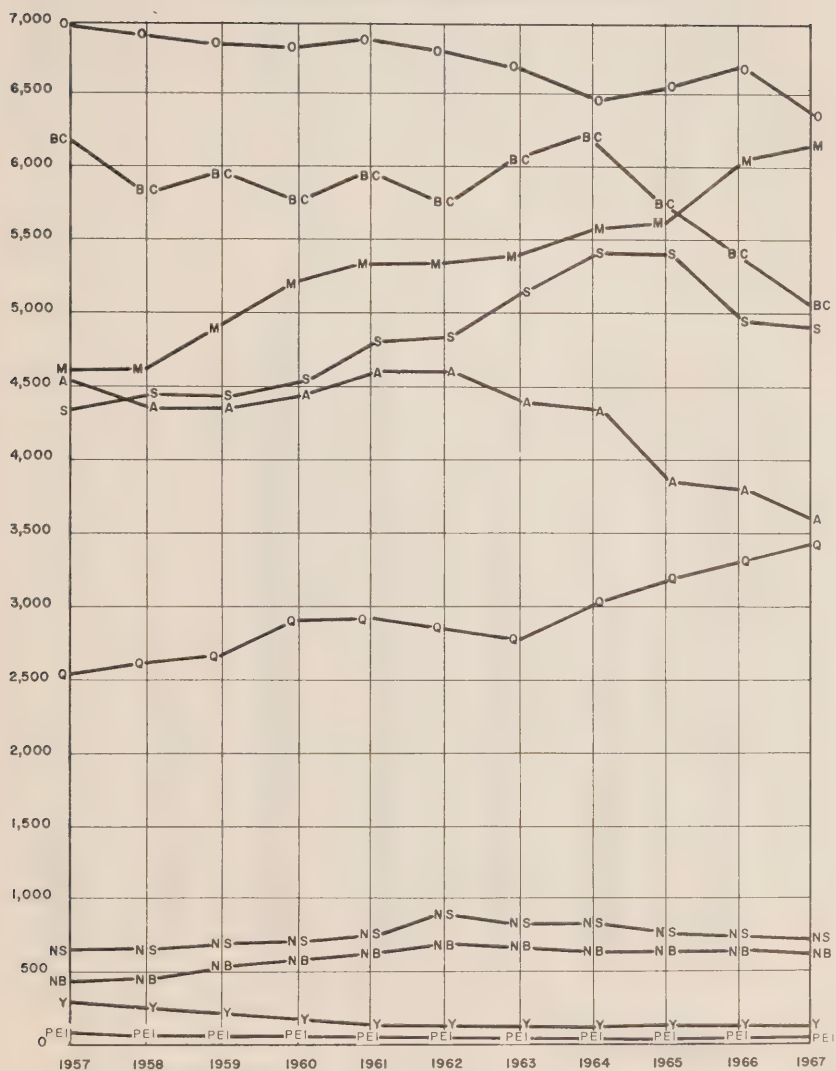
Indian Affairs Branch
SECONDARY SCHOOL ENROLMENT GROWTH



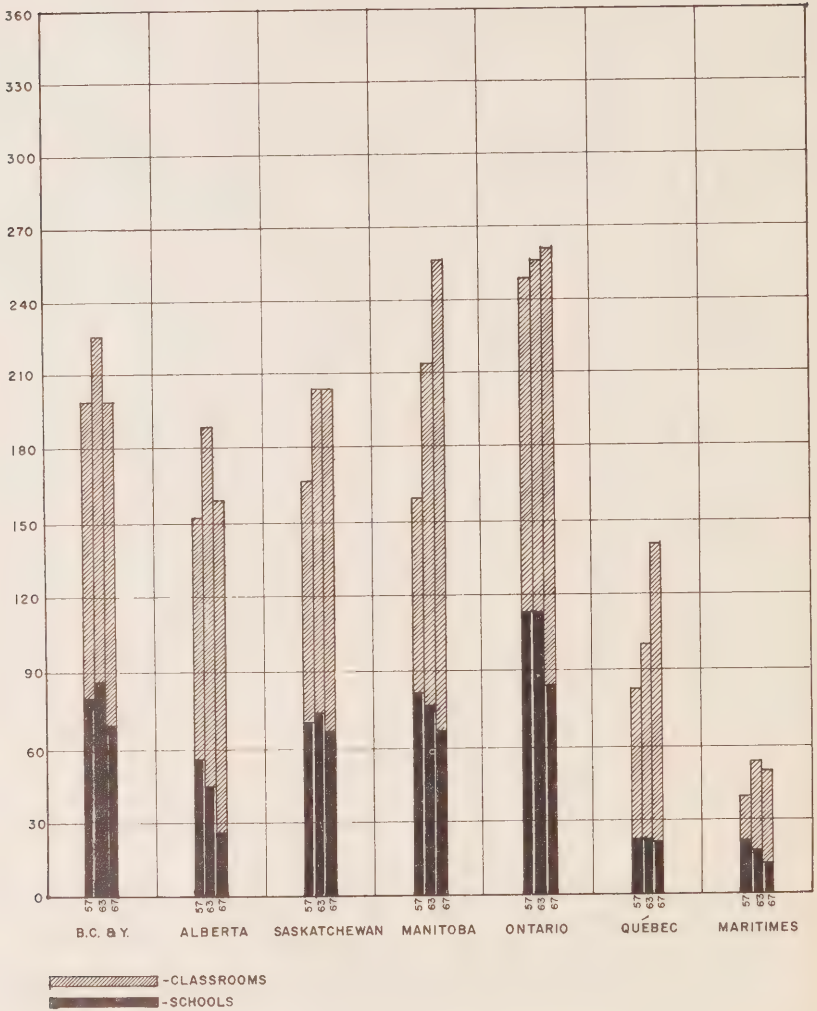
Indian Affairs Branch
ELEMENTARY AND SECONDARY SCHOOL ENROLMENT GROWTH



Indian Affairs Branch
FEDERAL SCHOOL ENROLMENT BY PROVINCE



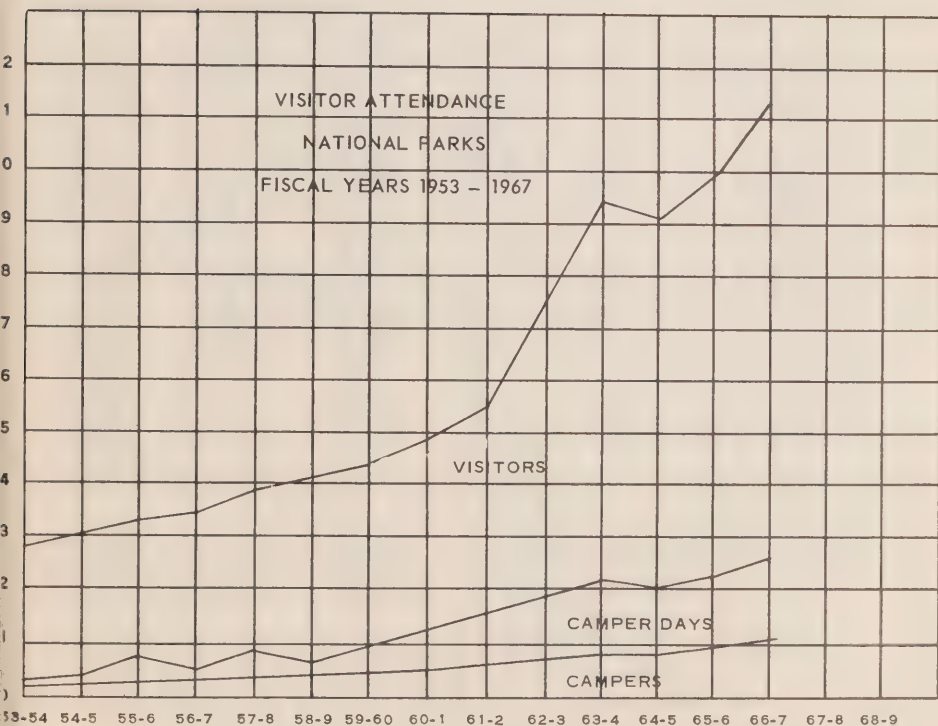
Indian Affairs Branch
NUMBER OF FEDERAL-OWNED SCHOOLS AND CLASSROOMS BY REGION



Trend in Indian Infant Mortality 1960-65

Both Sexes

Year	Live Births Registered	Deaths under 1 year of age	Infant Mortality Rate per 1,000 live births	Can. Infant Mortality Rate per 1000 live births
1960	7,522	617	82.03	27.
1961	7,807	596	76.34	27.
1962	7,854	588	74.87	27.6
1963	8,071	568	70.37	26.3
1964	8,250	508	61.58	24.7
1965	8,973	421	46.92	23.6



**Comparative Statement of Visitors to the National Parks
for the period April 1 to March 31**

National Parks	1966-67	1965-66	Increase or Decrease	%
Banff.....	2,044,537	1,803,490	+ 241,047	+ 13.36
Cape Breton Highlands.....	851,653	729,443	+ 122,210	+ 16.75
Elk Island	204,286	197,728	+ 6,558	+ 3.31
Fundy	753,310	679,406	+ 73,904	+ 10.87
Georgian Bay Islands.....	10,438	8,361	+ 2,077	+ 24.84
Glacier	917,264	767,206	+ 150,058	+ 19.55
Jasper	595,164	522,658	+ 72,506	+ 13.87
Kootenay	722,743	638,812	+ 83,931	+ 13.13
Mount Revelstoke	872,367	741,457	+ 130,910	+ 17.65
Point Pelee	726,035	697,328	+ 28,707	+ 4.11
Prince Albert.....	146,624	152,256	- 5,632	- 3.69
Prince Edward Island.....	1,130,773	967,372	+ 163,401	+ 16.89
Riding Mountain	738,724	687,959	+ 50,765	+ 7.37
St. Lawrence Islands	122,304	60,330	+ 61,974	+ 102.72
Terra Nova.....	179,647	108,738	+ 70,909	+ 65.21
Waterton Lakes	487,589	393,426	+ 94,163	+ 23.93
Yoho	864,454	689,313	+ 175,141	+ 25.40
Total	11,367,912	9,845,283	+1,522,629	+ 15.46

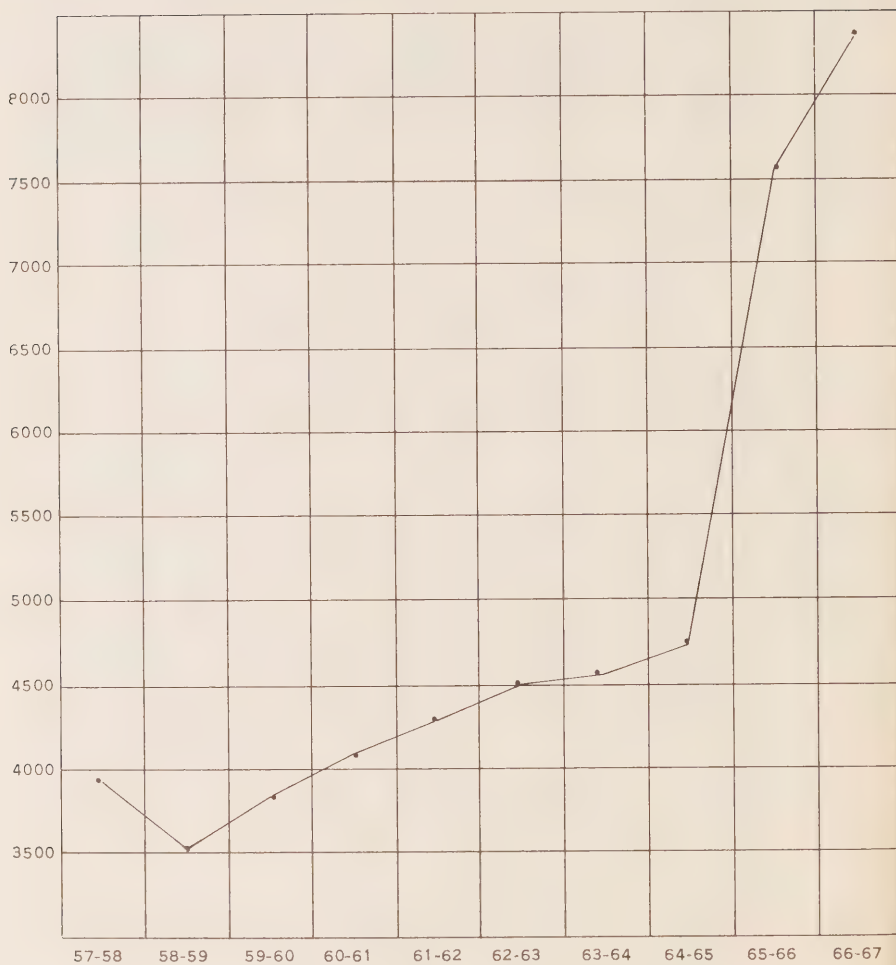
**Comparative Statement of Visitors to the
National Historic Parks and Major Historic Sites
for the period April 1 to March 31**

	1966-67	1965-66	Increase or Decrease	%
A.G. Bell Museum	121,804	110,158	+ 11,646	+ 10.57
Batoche Rectory	9,580	8,869	+ 711	+ 8.01
Fort Amherst	26,076	22,576	+ 3,500	+ 15.50
Fort Anne	74,428	66,534	+ 7,894	+ 11.86
Fort Battleford	43,111	42,878	+ 233	+ .54
Fort Beausejour	53,299	49,087	+ 4,212	+ 8.58
Fort Chambly.....	132,700	101,286	+ 31,414	+ 31.01
Fort Langley.....	133,237	111,941	+ 21,296	+ 19.02
Fort Lennox.....	29,995	26,191	+ 3,804	+ 14.52
Fortress of Louisbourg	193,127	148,072	+ 45,055	+ 30.42
Fort Malden	64,025	52,670	+ 11,355	+ 21.55
Fort Rodd Hill.....	58,810	36,614	+ 22,196	+ 60.62
Fort Wellington	60,495	40,917	+ 19,578	+ 47.84
Grand Pre.....	73,192	62,848	+ 10,344	+ 16.45
Halifax Citadel	328,386	213,878	+ 114,508	+ 53.53
Lower Fort Garry	107,303	92,208	+ 15,095	+ 16.37
Martello Tower	43,984	40,993	+ 2,991	+ 7.29
Palace Grand Theatre	9,599	5,525	+ 4,074	+ 73.73
Port Royal Habitation	46,458	42,699	+ 3,759	+ 8.80
Prince of Wales Fort	526	311	+ 215	+ 69.13
SS Keno	3,250	6,857	- 3,607	- 52.60
Signal Hill	396,762	275,209	+ 121,553	+ 44.16
Sir W. Laurier's House.....	7,872	7,562	+ 310	+ 4.09
Woodside	14,309	13,554	+ 755	+ 5.57
National Historic Sites Total...	2,032,328	1,579,437	+ 452,891	+ 28.67
Summary of totals				
National Parks	11,367,912	9,845,283	+ 1,975,520	+ 15.46
National Historic Sites	2,032,328	1,579,437	+ 452,891	+ 28.67
Grand Total	13,400,240	11,424,720	+ 1,975,520	+ 17.29

**COMPARATIVE STATEMENT OF CAMPERS AND CAMPER DAYS
FOR THE 1965 AND 1966 SEASONS**

National Parks	1966 Campers	1965 Campers	Increase or Decrease	%	1966 Camper Days	1965 Camper Days	Increase or Decrease	%
Banff.....	344,839	322,728	+ 22,111	+ 6.85	554,68	492,005	+ 62,563	+12.71
Cape Breton Highlands.....	73,598	57,875	+ 15,723	+ 27.16	157,666	123,597	+ 34,069	+27.56
Elk Island.....	8,343	6,964	+ 1,379	+ 19.80	11,383	9,773	+ 1,610	+16.47
Fundy.....	111,164	94,989	+ 16,175	+ 17.02	201,851	182,550	+ 19,301	+10.57
Georgian Bay Islands.....	4,991	4,450	+ 541	+ 12.15	28,703	24,417	+ 4,286	+17.55
Glacier.....	21,774	15,504	+ 6,270	+ 40.44	25,160	18,003	+ 7,157	+39.75
Jasper.....	136,082	117,439	+ 18,643	+ 15.87	212,729	197,448	+ 15,281	+ 7.73
Kootenay.....	58,416	48,232	+ 10,184	+ 21.11	95,375	79,190	+ 16,185	+20.43
Mount Revelstoke.....	—	—	—	—	—	—	—	—
Point Pelee.....	21,361	19,155	+ 2,206	+ 11.51	74,417	70,014	+ 4,403	+ 6.28
Prince Albert.....	30,750	27,304	+ 3,446	+ 12.62	300,357	250,247	+ 50,110	+20.02
Prince Edward Island.....	50,500	43,119	+ 7,381	+ 17.11	184,280	165,092	+ 19,188	+11.62
Riding Mountain.....	46,420	42,873	+ 3,547	+ 8.27	377,285	354,627	+ 22,658	+ 6.38
St. Lawrence Islands.....	5,572	3,860	+ 1,712	+ 44.35	12,159	9,596	+ 2,563	+26.70
Terra Nova.....	25,922	12,730	+ 13,192	+103.62	82,702	49,478	+ 33,224	+67.14
Waterton Lakes.....	70,906	63,017	+ 7,889	+ 12.51	121,702	102,642	+ 19,060	+18.56
Yoho.....	52,952	43,927	+ 9,025	+ 20.54	70,100	60,327	+ 9,773	+16.20
TOTAL	1,063,590	924,166	+139,424	+ 15.08	2,510,437	2,189,006	+321,431	+14.68

GROWTH OF THE DEPARTMENT OF
INDIAN AFFAIRS AND NORTHERN
DEVELOPMENT (1957 - 1967)



THE ABOVE FIGURES REPRESENT AUTHORIZED ESTABLISHMENT AS AT
MARCH 31 OF EACH FISCAL YEAR.

DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT
EXPENDITURES 1966-67

	\$ MILLIONS
DEPARTMENTAL ADMINISTRATION	1.9
INDIAN PROGRAM	104.7
INDUSTRIAL AND ECONOMIC DEVELOPMENT	8.6
WELFARE SERVICES	19.3
OTHER SOCIAL PROGRAMS	2.0
INDIAN HOUSING PROGRAM	9.4
OTHER COMMUNITY IMPROVEMENTS	7.5
EDUCATION - OPERATING EXPENDITURES	40.8
EDUCATION - CONSTRUCTION OF SCHOOLS, HOSTELS, ETC. . . .	11.5
GENERAL ADMINISTRATIVE SERVICES	5.6
NORTHERN PROGRAM	55.3
BUSINESS, RESOURCE & ECONOMIC DEVELOPMENT	5.3
WELFARE AND SOCIAL PROGRAM MAINTENANCE	2.0
ESKIMO HOUSING PROGRAM	2.2
EDUCATION - OPERATING EXPENDITURES	8.6
SCHOOLS, PUPIL RESIDENCES, ETC. . . .	2.9
TERMINAL SERVICES, GOVERNMENT SERVICE CORPUS AND OPERATIONS	32.9
GENERAL ADMINISTRATIVE SERVICES	1.4
CONSERVATION PROGRAM	35.6
NATIONAL PARKS - OPERATIONS	10.8
NATIONAL PARKS - DEVELOPMENT	14.5
HISTORIC PARKS & SITES - OPERATIONS	2.1
HISTORIC PARKS & SITES - DEVELOPMENT	3.8
GENERAL ADMINISTRATION - PARKS & SITES	1.9
MANAGEMENT & PRESERVATION OF CANADIAN WILDLIFE RESERVES	2.8
TOTAL DEPARTMENT	197.5

12 JULY, 1967

Summary of Revenues and Expenditures 1966-67

	Revenues	Expenditures
ADMINISTRATION		
Departmental Administration		1,928,608 76
Northern Co-ordination and Research		510,546 40
		<hr/> 2,439,155 16
Resource Development	2,830,884 69	1,251,260 57
<hr/>		
NATIONAL AND HISTORIC PARKS BRANCH		
Branch Administration	3,271 95	1,847,951 92
National Parks and Historic Sites	3,944,092 42	31,349,315 32
Grant to Jack Miner Migratory Bird Foundation		10,000 00
Grant in aid of the development of the International Peace Garden in Manitoba		15,000 00
National Battlefields Commission		281,000 00
Canadian Wildlife Service	6,389 76	2,051,661 26
	<hr/> 3,953,754 13	<hr/> 35,554,928 50
<hr/>		
INDIAN AFFAIRS BRANCH		
General Administration	411,892 81	5,002,005 57
Development and Maintenance of Indian Communities	461,647 34	46,779,085 22
Education	539,765 65	52,250,393 27
Grants to provide additional services to Indians of British Columbia		100,000 00
Indian Annuities		513,493 50
Pension to Mrs. Doris Ryckman		420 00
	<hr/> 1,413,305 80	<hr/> 104,645,397 56
<hr/>		
NORTHERN ADMINISTRATION BRANCH		
Branch Administration	2,443 20	1,372,509 69
Education	222,306 69	11,501,690 64
Welfare and Industrial	559,710 10	7,634,792 79
Yukon Territory	75,097 35	9,506,469 14
Northwest Territories	1,625,338 41	23,428,285 01
	<hr/> 2,484,895 75	<hr/> 53,443,747 27
OTHERS		80,893 95
TOTALS FOR DEPARTMENT	<hr/> 10,682,840 37	<hr/> 197,415,383 01

DIRECTORY TO ADDITIONAL INFORMATION

General Information	Information Services Division Department of Indian Affairs and Northern Development, 400 Laurier W., Ottawa
Monthly oil and gas report	Resource and Economic Development Group, Department of Indian Affairs and Northern Development, 400 Laurier W., Ottawa
*north (a bi-monthly magazine)	The Editor, north, Northern Administration Branch, Department of Indian Affairs and Northern Development, 400 Laurier W., Ottawa
National Parks	National and Historic Parks Branch, Department of Indian Affairs and Northern Development, 400 Laurier W., Ottawa
Canadian Wildlife	Canadian Wildlife Service, Department of Indian Affairs and Northern Development, 400 Laurier W., Ottawa
Indian Affairs	The Secretariat, Indian Affairs Branch, Department of Indian Affairs and Northern Development, 400 Laurier W., Ottawa

* Available from the Queen's Printer, Ottawa.

